

The Question of Persian Models in Armenian Architecture, from the Sassanids to the Safavids

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Abstract The article attempts a succinct synthesis of all that Armenian architecture and related arts owe to the models offered by Iran/Persia over the centuries, even millennia. Particular attention is paid to three chapters: a) the Sassanian heritage, b) possible exchanges around tomb towers at the start of Islamization, and c) the reticulated networks of the Middle Ages and modern period. The latter theme magnifies the ‘miracle’ of New Julfa, home to a remarkable Armenian-Iranian syncretism.

Keywords Iranian influence on Armenian art and architecture. Sassanian dome on square via squinches. Sassanian iconographic and ornamental themes. Blind colonnade-arcade. North-Iranian tomb towers. Khachkars of Old Julfa. Reticulated pendentives and bands. Armenian churches of New Julfa.

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1 Introduction: A Reverse Perspective on an Immense Legacy

The communications made during our conference on *Armenian art in Iran*, very naturally and logically, were devoted to the study of Armenian works created in Iran as witnesses of Iranian-Armenian (or Armenian-Iranian) exchanges, and as vectors of diversity and novelty in both cultures. My position is a little different, as I am a historian of Armenian art and especially architecture, who has, it is true, a great interest in ‘diasporic’ Armenian productions, but has more explored the history of art and architecture in Armenia itself, trying to understand its ways of development, its roots, borrowings and exchanges. For that reason, I thought that it might be useful to propose, in addition to our colleagues’ contributions, a glance from the opposite side. That is why this article, taking up and developing my paper presented at our Venice conference, will attempt to approach the question of Iranian/Persian-Armenian artistic relations with the inverse perspective, i.e. by presenting the Christian monuments of medieval Armenia as possible receivers of Iranian/Persian imprints in the field of architecture and architectural decoration, and also, in certain cases, as possible providers of new devices.

To set the framework of this essay, it seems useful to first recall some important data:

- a. the multi-millennial proximity between the two populations, Armenian and Iranian;
- b. the weight and duration of Iranian dominations on Armenia, first in Antiquity, under the Medes and the Achaemenid Persians (sixth-fourth centuries BC), then under the branch of the Parthian Arsacid dynasty (relatively soon Armenianised) which ruled Armenia from the beginning of the New Era until late fourth-early fifth century, and during the authority of Sassanid Persia on the eastern part of Armenian territory from 387/428 to about 640-50.¹ Later, from the sixteenth to

¹ A synthesis (with a bibliography) on the Iranization of ancient Armenia can be found in Dédéyan 2007, 101-162, ch. 3, *Les Arméniens entre l’Iran et le monde gréco-romain*. See also Grousset 1973, 105-295, ch. 6, 105-20, *Le protectorat romain et les rois arsacides d’Arménie*; ch. 7, 121-62, *Les Arsacides chrétiens*; ch. 8, 163-295, *L’Arménie sous l’hégémonie sassanide*. See also Khatchatrian 1971, 11-3; Russel 1987; 2004; Zekiyan 2005; many precious commentaries in Garsoïan 1989 and an excellent overview of Armenian-Iranian relations from the Achaemenids to the Sassanids by Garsoïan [2004] (2018), based on Garsoïan 1997. More recently, Nina Garsoïan and Maxime Yévadian (2021) have taken an interesting look at Armenian-Iranian ‘Intersections’ in Antiquity and the Middle Ages. Touraj Daryaee (2021) has observed the formation, after the ‘pan-Arsacid world’ or ‘Parthian commonwealth’ established at the beginning of our era, of a ‘distinct Armenia’ as a consequence of the creation by the Sassanids in the third c. of “a political entity in the name of Iran”. For her part, Nina Iamanidze (2019, 96-7) underlined the deep prechristian roots of the Persian-Iberian kinship.

- the first decades of nineteenth century, again the eastern part of Armenia was under the rule of the Safavid, Afshar, Zand and Qajar dynasties;²
- c. the deep cultural link that united the two peoples, particularly in the antique and late-antique periods, the kinship in social and administrative structure, in mores and the way of life between the two aristocracies before the adoption of Christianity by Armenians and of Islam by Persians;³
 - d. the strong Iranian imprint on ancient Armenian creeds and pantheon;⁴
 - e. the considerable mark left since antiquity by the Iranian lexical fund (the richest external contribution) in the Armenian language,⁵ as well as the Iranian layer in Armenian onomastics;⁶
 - f. the fact that, according to the historian of Armenia's Christianisation, Agathangelos (fifth c.), the evangelizer of Armenia, Saint Gregory the Illuminator (ca. 239-ca. 326), was the son of a Parthian prince (Agathangelos 2003, 1322-4, ch. *Life and history of Saint Gregory*, B, 21, C, 7);
 - g. the positive connotations in Armenian of the nouns Iranian (*ari* in Arm.), and Parthian (*part'ew* in Arm.) which mean, used

2 See enlightening (but scattered) passages on eastern Armenia under Persian domination between sixteenth and nineteenth centuries in Mahé, Mahé 2012, 338-421, in diverse parts of ch. 9-11: *Empires, Lumières and Modernité*.

3 Hunting, for example, was the favourite occupation of the elites in both societies. We will see a little later the wide manifestation of this cultural community in the arts. A thorough study was conducted by Petar Goliński on the considerable depth of the Iranian stratum in late antique Armenia: Goliński (2013).

4 See Aharonian 1980, 7, 9, 12 and *passim*; Grousset 1973, 116-20; Abeghyan 1968, 19-21; 1975, 15; Russel 1987; Garsoïan [2004] 2018.

5 The Iranian borrowings present in the Armenian language are much more numerous than the words of the properly Armenian lexical fund. The latter are estimated at between 400 and 700. This figure must be multiplied by two or three to obtain the number of Iranian borrowings, from Middle Parthian (during the reign of the Arsacids), and from Sassanian Pahlavi. Abeghyan (1968, 20) mentions 800 Iranian roots; Atjaryan (1940, 218-323) presents 1405 Iranian lexical units entered into Armenian, of which 960 from Pahlavi. He points out that, of these, 581 are still used in modern Armenian (Atjaryan 1940, 323). See also Jahukyan 1987, 488-584; Schmitt 1983; Nichanian 1989, 58-69.

6 See Atjaryan 1942-62. Petar Goliński (2013) noted for example that the overwhelming majority of the names of Armenian kings in antiquity and at the beginning of our era are Iranian. Garsoïan ([2004] 2018) cites the case, "in the 1st century CE, long before the consolidation of the Arsacid dynasty in Armenia, [of] the Roman candidate to the Armenian throne, prince Zeno of Pontus, [who] wisely changed his Greek name to the more acceptable one of Artaxias/Artašēs upon his accession".

as adjectives, respectively 'brave and valiant' and 'strong, big and courageous' (Malkhaseants 1944, 1: 266; 4: 83).⁷

2 Brief Prologue: First Traces of Exchanges in Antiquity

It is during the Sassanian period (third-seventh centuries CE) that the borrowings, by Armenian builders and artists, of Persian forms began to widely and obviously manifest themselves. Nevertheless traces of such transfers or elements of Iranian-Armenian kinship can be observed at earlier periods [fig. 1].

2.1 The Pectoral from Armavir

The city of Armavir on the site of the Urartian Argishtikhinili fortress-town became, from 331 BC, the capital of Orontid/Yeruandid Armenia (331-190 BC), which had regained independence after Alexander the Great's victory over the Achaemenid Empire. During excavations in 1963, an exceptional crescent-shaped pectoral was discovered [fig. 1.1]. It is made of cloisonné gold, the compartments of which were initially filled with light blue, black and white enamel. It is dated between the sixth and fourth centuries BC and considered to be later than Urartu but prior to Orontid independence and therefore linked to the Achaemenid period (Karapetian, Santrot 1996, 196; Khatchatrian 2007, 161, fig. 108). A rich symbolism linked to the worship of various deities, fertility, immortality... is attributed to the two stylized doves, the three schematized trees of life that separate them, and the hanging festoon of lotus flowers and buds. The motifs that make up the central compartment with three trees between two rows of head-to-toe triangles are characteristic of Urartian art but can also be seen on bas-reliefs of Persepolis. This pectoral is considered to be an heir to the Urartian tradition, but executed by Achaemenid or Armenian craftsmen.

2.2 The Median/Achaemenid-style rhyton from Erebuni

Excavations carried out in 1968 on the Urartian site of Erebuni fortress (eighth-seventh centuries BC, with post-Urartean phases),

⁷ In this regard, Annie and Jean-Pierre Mahé speak of an "idealization of the Parthian past in Armenian tradition" (Mahé, Mahé 2012, 75). Note that this is not the case with the ethnonym *parsik* = Persian, probably because of the violent Zoroastrian proselytism of the Sassanid Persians in Armenia, and their hostility to the Arsacid (Armenianized) Parthian dynasty of Armenia, which resulted in the latter's abolition in 428.

currently a southern quarter of Yerevan, capital of the Republic of Armenia, unearthed a silver rhyton that was obviously subsequent to the fall of Urartu [fig. 1.2]. It is generally dated to the fifth century BC. This rhyton is adorned ('ridden') by the figure of a horseman whose dress, headgear - marked with an eagle on both sides - and *akinakes* (dagger) are typical Median attributes.⁸ Given certain peculiarities attesting his high rank (notably the above-mentioned eagle image), it is assumed that the horseman represents a prince of the local Orontid/Yeruandid dynasty.⁹ It is proposed to identify him with Orontes I, a member of this dynasty, who exercised from 401 BC the function of satrap of one of the two satrapies of Armenia (the 18th) which were parts of the Achaemenid Empire. Along with the pectoral mentioned above, this rhyton could therefore be one of the oldest surviving Armenian objects of Iranian, more precisely Achaemenid,¹⁰ inspiration.

2.3 The Beniamin 'Palace'

The site of Beniamin, located about ten km south of Gyumri, in the northwest of the current Republic of Armenia, contains, on a hill, the remains of a group of buildings conventionally called 'palace', excavated since 1989. Several clues allow to date them to the fifth-fourth centuries BC, a period when Armenia was included in Achaemenid Persia. Two halls are particularly noteworthy, as they were hypostyles and retain two column bases, later reused, which are clearly Achaemenid. One of them, in particular, has a sculpted treatment characteristic of Achaemenid, notably Persepolitan, architecture, although it is smaller and lower than the norm [fig. 1.3]. Indeed, between its square plinth and upper torus, its campaniform body is decorated with more or less lotiform fluted leaves (Ter-Martirossov 2007, 100; Ter-Martirossov, Deschamps 2007).

⁸ Arakelyan (1976, 42-3); Tiratsyan (1988, 52-3); Ter-Martirossov (1996, with brief bibliography at page 200); Khatchatrian (2007, 158, fig. 105 - our fig. 1.2).

⁹ According to Garsoïan ([2004] 2018), the Orontids/Yeruandids, whose name derives from Avestan *auruuant* (mighty, hero), were of Iranian origin.

¹⁰ The mentioned details are proper to figurations of Medes in Achaemenid art. According to Peter Calmeyer (1986/2017), it is difficult to identify characteristics of Median works of art. Here we are dealing with a piece datable well after the fall of the Medes and thought to represent a governor in the service of the Achaemenids. On the rhyton, along with the Median dagger, Vladimir Lukonin (1977, 76) emphasizes the typically Achaemenid character of the saddlecloth and its ornamentation.

This group of buildings, within a large estate still little studied,¹¹ attests the presence in the north of eastern Armenia of local or Persian representatives of the Achaemenid power. We will come back to this site later, when we consider the hypothesis that the plan of the Iranian hypostyle hall could be transmitted to Christian Armenia.

2.4 The Crown of Artaxiad Kings

The Artaxiad or Artashesid dynasty (named after its founder Artaxias/Artashes – r. 189-160 BC) which ruled Armenia from about 189 BC to the beginning of the New Era was probably of Orontid or perhaps of Persian Achaemenid origin. In any case, under their rule, Armenia was subject to a large Greco-Roman influence, before coming under the control of Rome around 66 BC. Nevertheless, strong links remained with the Iranian tradition. The crown worn by these kings is one of the witnesses to this. We know it mainly from the coins minted by the most famous representative of this dynasty, Tigran II ‘the Great’ (r. 95-55 BC) [fig. 1.4]. In his analysis, Antonio Invernizzi explains that the “Armenian tiara [is] a clearly Iranian mark [...], a combination of Achaemenid features [...]. The cylindrical body and toothed end are said to descend from the tiara of the Kings of Kings” (Invernizzi 2007, 180; Garsoïan [2004] 2018). While the eight-pointed star between two eagles turning their heads backwards is a very common motif in the Hellenistic culture of the ancient Near East, especially among the Seleucids. It marries the star which symbolizes the celestial protection of the sun god Apollo/Mithra and the eagle which represents the supreme deity Zeus/Ahura Mazda. The same ‘Armenian tiara’ was worn by the kings of Commagene (Nemrud Dag) of the first century BC who claimed to have Orontid ancestors (Mahé, Mahé 2012, 32) [fig. 1.5]. Thus the crown of the Artaxiad kings was, by the duality of its symbols, the emblem of the mixed Iranian and Greco-Roman cultural orientation of Armenia at the end of antiquity and the beginning of the New Era.

¹¹ A new scientific project was launched in 2024 for a resumption of the archaeological study of the Beniamin site by the French ArchéOrient laboratory of the University of Lyon 2 and the CNRS, in collaboration with the Institute of Archaeology and Ethnography of the Academy of Sciences of Armenia. See Aghikyan, Gondet, Laisney 2025. In 2026-29 it will be included in a wider programme concerning the province of Shirak, called FACE (From Achaemenid to Christian Era), and financed by the French Agence Nationale de la Recherche and the Ministry of Europe and Foreign Affairs.

2.5 Horsemen on Clay Plaques from Artashat

In 1973, during excavations at the site of Artashat, the capital of Artaxiad/Artashesid Armenia, small terracotta plaques dating from the beginning of our era and depicting a horseman were discovered. Along with stylistic features revealing Greco-Roman affinities, some researchers have convincingly identified in the iconography of the horseman and his mount a manifestation of the cult of Mithra.¹² Nina Garsoïan mentioned “the representation of an idealized rider who must be Mithra the hunter”. However, given the extremely wide geography of this cult – in ancient Armenia, the local version of Mithra, Mihr, was also very popular and the horse was associated with his cult – the depictions of horsemen are probably not the most significant trace of a specifically Iranian imprint.



Figure 1 First Iranian imprints on Armenian art and architecture. 1.1 Pectoral from Armavir (sixth-fourth c. BC). Photo Jacques Santrot (1996, 196, n° 180); 1.2 Rhyton from Erebuni (fifth c. BC). Photo Claude Sintès (2007, 158, n° 105); 1.3 Beniamin «palace». Base of column (fifth-fourth c. BC). Photo PD; 1.4 Coin of king Trdat II (r. 95-55 BC). Photo Claude Sintès (2007, 183, n° 144); 1.5 King Antiochus I of Commagene (first c. BC), Nemrut dag, Turkey. Photo Zaven Sargsyan

¹² See Arakelyan 1976, pl. LXXXVIII, LXXXIX; Khachatryan 1981, 180-4, pl. XXVI; Garsoïan 1997, 15, fig. 4; Garsoïan [2004] 2018.

3 Possible Sassanian Contributions to Armenian Architectural Devices

3.1 Dome on Square Via Squinches

Given the above-mentioned immense legacy, it is not surprising that several models of Sassanian origin can be presumed or identified in the Armenian productions, especially architectural ones, of the early Christian (fifth-sixth cc.) and pre-Arab period (a large part of the seventh c.). However, the architectural exchanges remained more in the shadows than the iconographical ones (which will be reviewed below). Nevertheless, the hypothesis of a Sassanian contribution to the genesis of the Armenian (and Iberian = Georgian) dome on a square base, notably through the intermediary of squinches, has been evoked for a long time.¹³ Let us remind that ‘squinch’ designates, to simplify, as far as its main architectural function in Persian and Armenian context is concerned, a half-cone which ensures, placed at each of the four angles of the square formed by the supports of the dome’s drum, the transition to the latter’s circular (Persia) or octagonal (Armenia) base [fig. 2].

During the early Christian period (fourth-sixth cc.), Armenian architecture showed a predominance of longitudinal compositions without a dome (Donabédian 2008, 33-50). But at the same time, several remains of memorial or martyrial chapels with domes are preserved, which, although undated, seem to belong to the early Christian period (Donabédian 2008, 28-30, 57). Towards the end of the fifth century, two important churches, the cathedral of Echmiadzin and St. Sergius of Tekor, almost certainly featured a dome on a tetrapod base (Donabédian 2008, 50-7). Probably from the late sixth century and certainly from the beginning of the seventh century, Armenian compositions with a dome on a square plan used squinches to ensure the transition from the square to the octagonal base of the

¹³ Strzygowski (1918, I, 359-369, II, 504); Yovsepean (1944, 27, 29, 40, 42-3); Toramanyan (1948, 33); Agababyan (1950, 23); Jakobson (1950, 25); Ghirshman (1962, 290); Tokarskii (1964, 59, 61, 65, 66 [with strong reservations]); De’ Maffei (1973, 300-307); Silvi Antonini (1977, 449 [concerning Iberia/Georgia]); Mailov (1979, 32-33). As for Chubinashvili (1969, 63), he merely refers to the numerous Sassanian domes on squinches without establishing any clear link of influence with those of Christian South Caucasus. For his part, Pope ([1969] 1976, 36) simply mentions that “Christian acceptance of a Sasanian architectural type reached medieval Europe”.

dome-bearing drum.¹⁴ The squinch was maintained until the middle of the seventh century, when it was supplanted (not totally) by the pendentive (examples of pendentives in seventh century Armenia: Donabédian 2008, 119-21, 126-7 *et passim*).

As some authors have recalled, the transition by means of squinches (of various types) existed here and there, both in the West and in the East Christian world, as early as the fifth-sixth centuries CE (Chubinashvili 1969, 63-64; Kazaryan 2012, 1: 236-42). But the most homogeneous corpus is found in Sassanian Persia from the third to seventh centuries CE. Indeed, the dome on four half-cone shaped squinches is attested during the Sassanian period, both on palatine buildings and on sanctuaries. The first group includes the main halls of Firuzabad, Bishapur, Qalah-i Duktar/Qala-ye Doktor (third c.) and Sarvistan (fifth c.) palaces [figs 2.1, 2.2].¹⁵ In the second group, one finds several examples of the main sanctuary of Zoroastrianism (Mazdaism), which became the official religion again under the Sassanid dynasty: the fire temple or pyraeus, known as *ateshgah* or *chahartak* in Pahlavi [figs 2.3, 2.4].¹⁶ The base is square in plan, and either tetrapod or (mainly) cubic in elevation, and from it, the transition to the base of the dome is always made by squinches. The dating of these sanctuaries is uncertain, but their frequent presence in Sassanian Persia, during the third-seventh centuries (and also in the early Islamic period), is not in doubt.

Four peculiarities must be noted in Sassanian constructions with a dome on four squinches: a) the dome, in particular in the first group, is mainly ovoid/parabolic (vertically stretched), b) the drum is almost absent; when preserved or rebuilt, it is limited to a low, externally square belt, corresponding to the inner register with squinches, c) the building technique uses bricks and small rubble stones, d) the suppleness of this technique, thanks to the use of small units, permits to integrate the squinches in a smooth transition from the square to the circular basis of the dome (Huff 1993, 45-56).

These four traits seem totally foreign to Armenian practice and stone architecture, but in fact, they just require an adaptation to

14 For the first squinches in Armenia, forming usually two superimposed rows, see Donabédian (2008, 68, 70, 76, 78-9, 84, 86, 105-7 *et passim*). In the churches of the Avan-Hripsime type (late sixth-early seventh c.), sorts of squinches are combined with a horizontal curved band to permit the transition to the circular basis of the drum. See Donabédian (2008, 80-4).

15 Ghirshman (1962, 124, fig. 161; 139, fig. 177; 181, fig. 222; Huff (1993, 47, fig. 17-18; 48, fig. 23-24; 49, fig. 25; 51). See also Bloom & Blair (2009, 3, s.v. 'Squinch', 228-30) according to whom (229) the squinch "may well have originated in Sasanian Persia and been quickly assimilated by Late Imperial Rome [...] and later become a characteristic of Byzantine buildings".

16 See Godard 1949, 187-209; Ghirshman 1962, 50, fig. 193; Huff 1993, 43, fig. 15; 51-5, fig. 29-32, 35.

different techniques and materials. As for the feeble height of the drum, one has to remember that the earliest drums in Christian Armenia were often short (low) and even (in one case) absent [figs 2.5, 2.6].¹⁷ Finally, it should be remembered that the parabolic shape of the domes was not totally unknown to Armenian architects. Indeed, the surveys of Tiran Marutyan showed that the south-east angular chamber of Avan Cathedral (end of the sixth century), now in ruins, was covered by an ovoid dome [fig. 2.7], which was probably the case also for the other three angular chambers (Marutyan 1976, 16-17; 2003, 47-9). In other words, the hypothesis of a Sassanian imprint on the elaboration of Armenian domes on a square base through squinches seems plausible.¹⁸

Two arguments support this hypothesis. A) The term which designates in Armenian the dome, *gmbet'*, was borrowed from Pahlavi/Middle Persian *gumbad*, *gmbat*, and Old Persian *kunbad*, *gunbad*, which have the same meaning (Atjaryan 1971, 567). B) Several sources indicate that the Sassanids had fire temples erected in Armenia to impose their religion on the Armenian population by force (Donabédian 2008, 50-1, note 122; Garibian de Vartavan 2009, 329). Called *atrushan* in Armenian (again a Pahlavi borrowing) (Atjaryan 1971, 290-1, in particular the Pahlavi *atur* 'fire'), these are not preserved but certainly existed. It is possible that they passed on their model to Christian Armenians. One of the *atrushans* is believed to have been discovered under the apse of Echmiadzin cathedral (Sahinian 1966, 67-8, 70, pl. XVIII, fig. 13, pl. XXIX), but the identification as a fire temple of what looks like a modest traditional hearth and may have been a relic pit does not seem convincing (Garibian de Vartavan 2009, 330-1).

¹⁷ Donabédian (2008, 28 and 57 [Voghjaberd - without a drum; Mount Sepuh, St. Gregory chapel - low drum], 76 [Arzni - low drum]). A low drum is still present around 620 at St. Hripsime (Donabédian 2008, 84-5). At St. Sergius of Tekor (late fifth c.), on the contrary, the drum was rather high and externally cubic (Donabédian 2008, 54-5), as in the mausoleum of Galla Placidia in Ravenna (first half of fifth c.).

¹⁸ For his part, Kazaryan (2012, I, 237-41) emphasizes the ubiquity of squinches solutions over a vast area at about the same time, notably in Sassanian Persia, and prefers to underline the originality of the solutions adopted by Armenian and Georgian builders. Nevertheless, in another publication, co-authored with Lilit Mikayelyan, he nuances his position by writing "The impact both of Byzantine and Iranian [= Sassanian] models in the creation of a specific shape of under-dome squinch-pendentive transitions by Armenian masters of the early seventh century seems obvious". Then he calls "pure Sasanian system" several domed constructions with squinches of fifth-sixth centuries in northern Mesopotamia and Italy (Kazaryan, Mikayelyan 2019, 75, 77).



Figure 2 Sassanian and early Christian Armenian domes on square base and squinches.

2.1-4: Sassanian, photos Fabien Krähenbühl. 2.1 Firuzabad, castle of king Ardashir (third c. CE);

2.2 Qalah-i Duktar palace (third c. CE). 2.3-4: Niasar, Chahar-taq (Fire temple) (probably before seventh c.).

2.5-7: Early Christian Armenian. 2.5 Mount Sepuh, Turkey, mausoleum of St Gregory (ca. fifth-sixth cc.).

Photo Ch. & J.-C. Hotellier; 2.6 Voghjaberd chapel (ca. fifth-sixth cc.), plan, section and restitution by Nikolai Tokarskii; 2.7 Avan Cathedral (590s), survey of SE chamber and lateral section of Western part by Tiran Marutyan

3.2 Palatine Halls with Basilical Layout

Some authors have attributed a Sassanian origin to the basilical structure of the pre-Arab Armenian palatine halls of Dvin, Zvartnots and Arutj.¹⁹ Just as Greek and Roman civil basilicas gave rise to large Christian churches, it is logical that in the East, the vast hypostyle palatine halls of antiquity, such as the famous Achaemenid *apadanas*,

¹⁹ See Jakobson 1950, 51; Mnatsakanyan, Stepanyan 1971, 7, 26. On these halls: Donabédian 2008, 211-17.

served as models for subsequent centuries, while retaining their palatine function. This is what we see in the Sassanian period with the great hypostyle halls in the palaces. It seems plausible that these could inspire the builders who served the Armenian princes. But one factor considerably weakens such a hypothesis – the existence in Armenia of a long local tradition of hypostyle palatine halls, attested as early as the kingdom of Urartu, and manifested here and there over the centuries,²⁰ not to mention possible Hellenistic-Roman collateral contributions.

The example of the above-mentioned Beniamin site is enlightening in this respect. About five hundred meters southeast of the Achaemenid-era ‘palace’, where we noted the traces of two hypostyle halls, the remains of a Hellenistic-period complex were unearthed. This included a large longitudinal hall with two rows of columns, in other words, a basilica with three naves. In accordance with the general rule in civil basilicas, here the three naves had equal width (on the contrary, in Christian churches of basilical type, the central nave is much wider than the side aisles, and it ends, on the east side, with a rounded apse that houses the high altar). According to Beniamin excavations codirector Hamazasp Khachatryan, the building can be dated to the early first century BC (Khachatryan 2007, 113).

Taking into account the wide ubiquity and great longevity of the oblong basilica composition with three naves applied to large ceremonial halls, it does not seem reasonable to link its Armenian manifestations of the seventh century CE specifically to a Sassanian influence.

3.3 Blind Colonnade-Arcade

The hypothesis of a Sassanian contribution to the genesis of the Armenian blind colonnade-arcade [fig. 3] is little studied. Josef Strzygowski and later Fernanda De Maffei were some of the few to mention it, while Roman Ghirshman merely writes about the influence of Sassanian blind colonnade-arcade in general terms.²¹ More recently, Armen Kazaryan and Lilit Mikayelyan turned to this question again (Kazaryan, Mikayelyan 2019, 81). The first observation which must be made in this regard is that it was in Sassanian Persia,

²⁰ Donabédian 2008, 211 and fn.; 366. Nevertheless, it is disconcerting that, according to Atjaryan (1979, 365), the Armenian word *tačar* = ‘palace’, ‘temple’, comes from the old-Persian *tačara* = palace, which seems to confirm a particular link with the Persian palaces tradition.

²¹ See Strzygowski 1918, 1: 438-9, 444-5; Ghirshman 1962, 291-3. De Maffei (1968, 24) considers that the facades of the Sassanian palaces, despite their “fairly classical rigour”, may have been the origin of the Armenian blind arcades.

particularly on the great royal buildings of Firuzabad (Dieulafoy 1885, IV, 44, fig. 29) (third c. CE), and Ctesiphon/Taq-e Kisra (Dieulafoy 1889, V, 242, pl. 3; Kröger [1993] 2011) (third or sixth c.), that the colonnade-arcade had its most monumental manifestations of Late Antiquity [figs 3.1-3].

This remarkable way of enlivening façades and emphasizing their verticality was widely adopted in Armenia [figs 3.4, 3.5], then in Iberia/Georgia, since the seventh century, and further brilliantly developed all over the centuries by both architectural schools (Donabédian 2024). One of its main sources is certainly classical and early Christian Roman art. Indeed blind colonnades-arcades are present on Roman architectural works and their sculpted representations, and on the lateral (long) sides of many sarcophagi. Among the oldest buildings still visible, one can mention the Golden Portal of Diocletian's palace at Spalato/Split (ca. 305), the so-called Basilica of Constantine or 'Aula Palatina' in Trier (third-fourth cc., rebuilt in the nineteenth c.), the mausoleum of Galla Placidia in Ravenna (first half of the fifth c.) and several early Christian constructions in Asia Minor, notably in Tur Abdin and Cilicia (Donabédian 2024, 48-50).

This vast corpus includes two different principles that sometimes combine: a) a row of half-columns and engaged arches above them, all projecting on the façade or the surface that carries them, and b) a row of flat niches, arched in their upper part, 'hollowed' in the surface they decorate. To put it simply, sarcophagi belong to the first group, while in the medieval West and in the Byzantine world, the second formula, that of flat niches, predominates. Armenia, for its part, has above all opted for the first principle, that of the projecting colonnade-arcade.

In Sassanian Persia, impressive rows of niches, arched at their top, now much eroded, are partially preserved on the above-mentioned royal palaces. It is thus mainly the principle of flat niches 'hollowed' into the façade that is applied. However on both palaces, Firuzabad and Taq-e Kisra, the niches are separated by high half-columns protruding from the façade, which almost creates a combination of the two principles [figs 3.1-3]. It is interesting to note that on the palace of Taq-e Kisra, the powerful first register with two levels of arched niches is punctuated by strong pairs of engaged columns. Now, in Armenia, since the seventh century, blind colonnades are mainly made up of pairs of half-columns [figs 3.4, 3.5] (a kinship underlined by Josef Strzygowski 1918, 1: 438-9).

It should also be noted that Persian artists, like Roman and early Christian sculptors of sarcophagi, had the idea of reducing the colonnade-arcade and using it on minor forms. They applied it to the

decoration of silver vases.²² Here, too, as on the Roman sarcophagi, the half-columns (often double) and half-arches protrude and serve as frame for human figurations (here, female figures of dancers).

To conclude on this subject, it can be assumed that, while the main source of the Armenian blind colonnade-arcade is, in all likelihood, Roman, a Sassanian contribution to its genesis is also very plausible. Indeed, it is difficult to imagine that the Armenian elites and the architects in their service were not impressed by the powerful effect of the devices that covered the façades of their Persian overlords' palaces.

22 See three examples from the fifth-seventh centuries in Trever, Lukonin (1987, 112-13, n° 18-20, figs. 36-53); and in Overlaet (1993, 234-8, n° 85-87).

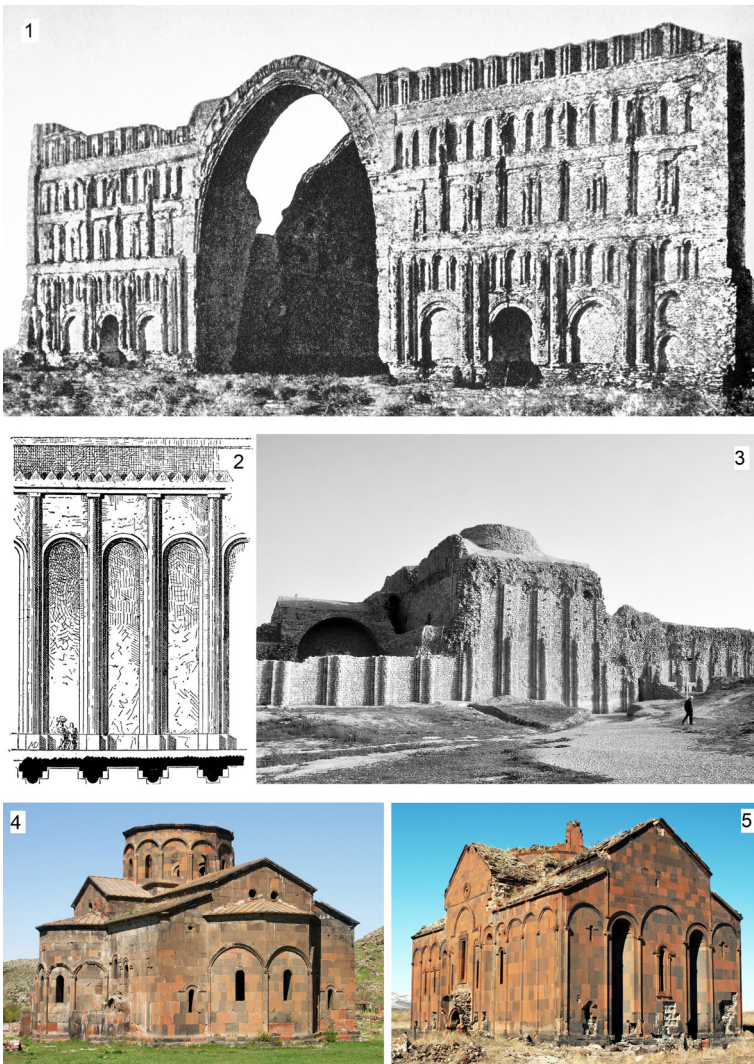


Figure 3 Possible Sassanian contribution to Armenian blind arcade. 3.1 Ctesiphon/Taq-e Kisra palace (third or sixth c.). Photo Jane Dieulafoy (1881); 3.2 Firuzabad, castle of king Ardachir (3rd c.). Reconstruction by Marcel Dieulafoy (1884-89); 3.3 Firuzabad, castle of king Ardachir (third c.). Online photo Livius (cropped); 3.4 Talin Cathedral, Armenia (probl. 689-93). Photo PD; 3.5. Ani Cathedral, Armenia (present-day Turkey) (989-1001). Photo PD

3.4 Stepped Pedestal

The principle of progressively elevating the volume of a sanctuary towards the sky, towards the divine, through successively receding steps or platforms, corresponds to an aspiration common to many ancient cultures, as witnessed by Egyptian pyramids and Mesopotamian ziggurats. The reduction of this graduated elevation and its application to the crepidoma alone, to the sole platform supporting a temple or a mausoleum, was also a natural evolution that we observe in both classical (western) and Iranian antiquity, for example in Greek and Roman temples, and under Achaemenid mausoleums (Cyrus's, in particular – Ghirshman 1963, 135-6, fig. 185).

In Armenia, the principle of the stepped crepidoma [fig. 4] was already present, in a partial version, at the entrance to the Garni temple (probably first c. CE). A complete crepidoma existed in some memorial churches of the first Christian centuries (Tekor, Yereruyk, Echmiadzin, Zvartnots – Donabédian 2008, 45, 49, 51, 54-6, 191-2). In early Christian and medieval Armenia, the subsequent reduction of the crepidoma gave rise to two new features. The first is the construction of several steps (usually three) at the bottom of all church walls. These steps no longer belonged to a platform beneath the building,²³ but merely widened the outer foot of the walls and, to a lesser extent, consolidated them. The second is a pedestal with a few steps (often three, sometimes much more), under the cruciferous quadrilateral stelae and columns that were widespread in the fifth to seventh centuries [figs 4.3-5] (Tchakerian 2016).²⁴ It is precisely in this last area that a Sassanian contribution can be envisaged.

In this vast context, a Sassanian element, apparently secondary, can perhaps claim a certain role in the choice, by Armenian patrons and artists, of stepped pedestals under cruciferous stelae and columns. These are the fire altars, within the fire temples that covered the Sassanid kingdom and the countries submitted to its authority, including Armenia. Now, these fire altars, of which the Sassanian coins, from third to seventh century, give many images, rested on a pillar preceded by a stepped base, generally with two or three steps [fig. 4.1] (Overlaet 1993, 294-9). There were also votive monuments in Sassanian Persia in the form of a column on a pedestal, again with three steps. An example of this is given by the monument to king Shapur I (240-272) at Bishapur (266) [fig. 4.2] (Ghirshman 1962, 151, fig. 194).

²³ These steps at the foot of the walls are often mistakenly considered to be part of the building's basement.

²⁴ The same principle appeared from the ninth century onwards on pedestals of *khachkar* plaques.

Through the fire altars erected in the fire temples forcibly built in Armenia, as well as through the Sassanian coins, the model of this type of base must have been well known in Armenia. It could therefore be reproduced by local Christian craftsmen under columns and stelae crowned with a cross. Nevertheless, inspiration could also come from other sources, including local ones.

4 Sassanian Iconographic Themes in Armenian Architecture and Art

The impact of Sassanian iconographic themes on architectural decoration and figurative art of early Christian and medieval Armenia [figs 5 to 10], as well as on that of Georgia and Caucasian Albania, has been the subject of several observations in numerous publications during the twentieth century,²⁵ and of systematic and detailed studies in recent years.²⁶ In the first group were mainly considered details of architectural ornamentation (e.g. denticulated bands, cornices with small arches), technical aspects of sculpted decoration, certain figures on quadrilateral stelae and some themes such as Daniel between lions and hunting figures. Some works devoted to the church of Aghtamar paid a particular attention to the Sassanian roots of its numerous sculptures (Der Nersessian 1965, 25-35; Orbeli 1968, 113-17). In more recent studies, in-depth analyses of iconography and semantics have been devoted mainly to animal subjects (real and fantastic animals, including the famous *Senmurv*), plant motifs and attributes-objects (wings, ribbons, necklaces, wreaths...). In a recent article, a strong emphasis has been rightly placed on the considerable impact of the Greco-Roman or Hellenistic heritage from which the Sassanid and Armenian arts have equally benefited (including the sphere of geometric ornaments) in iconography, style and even semantics (Mikayelyan 2023). At the same time, its author observes a common evolution of these two arts towards stylization and geometrization, which distanced them ever more from the Greco-Roman fidelity to nature.

25 Only some of them are mentioned in this short essay: Strzygowski 1918, 1: 411; 2: 687, 695, 718; Baltrušaitis 1929, XI [foreword by H. Focillon], 43-9, 55-8, 65-6; Toramanyan, T. 1942, 23-4, 86, 87, 212-13; Yovsepyan 1944, 14, 28, 31, 62-4, 69, 71, 74, 77, 104, 106, 116, 123; Chubinashvili 1948, 145, 164, 1761; Arakelyan 1949, 29, 46-7, 54-7, 61, 65, 67-9, 85; Grabar 1966, 32-6; Silvi Antonini 1977, 449; De Maffei 1968, 27-9; Thierry 1971, 56-7, 66, 69, 77; Der Nersessian 1977, 55, 75. A brief synthesis in Donabédian 1991b, 131-4.

26 See Compareti 2010; 2014; Mikayelyan 2015; 2016; 2017a; 2017b; Hakobyan, Mikayelyan 2018; Asutay-Effenberger, Daim 2019; Iamanidze 2019; Kazaryan, Mikayelyan 2019; Mikayelyan 2022; 2023; 2026.

Only the main motifs from the mentioned categories, with only a few examples, will be evoked here, briefly, since this large subject has already been dealt with at length. Before turning to them, we shall remind that the propagation of the Persian models, as one may suppose, could use the channel of ‘minor’ Sassanian works, such as metal dishes, vases (Iamanidze 2019, 101), and fabrics, very appreciated in a large part of the known medieval world.



Figure 4 Sassanian and Armenian stepped pedestals. 4.1-2: Sassanian. 4.1 Fire altars on Sassanian gold dinars (fourth-fifth cc.). Photos Bruno Overlaet (1993, 296-9); 4.2 Bishapur, monument to king Shapur I (266). Online photo Flickr. 4.3-5: Armenian. Photos PD. 4.3 Oshakan, memorial column (ca. fifth-sixth cc.); 4.4 Odzun, memorial monument with two stelae (ca. seventh c.); 4.5 Gogaran, cross-topped monument, reconstructed from various elements (ca. sixth-seventh cc.)

4.1 Prestigious Scenes with Kings and Princes: The Magi

Attention is first drawn to several works of Christian Armenian sculptors and painters probably inspired by prestigious scenes with a Sassanian king or prince, grouped princes, or a hunter on horseback or on foot. One of the most impressive images illustrating the penetration of such Sassanian motifs into Christian Armenian pictorial culture is the scene of the Adoration of the Magi in one of the four oldest (sixth or seventh c.) illuminations of the Echmiadzin Gospel, where the Magi are represented like Sassanian kings and princes [fig. 5.1]. This is particularly noticeable in the posture of the Magi, knees apart and heels together, but also, according to Sirarpie Der Nersessian, in their dress and the head of one of them, depicted in profile (Der Nersessian 1969, 139-40; 1973, 501; 1977, 75). Let us add that long Sassanian ribbons are attached to the cap of this same figure.

It is likely that Christian artists intended, by these references to the glory of Sassanid kingdom, to emphasize the significance of the visit to the divine child, of the Magi “coming from the East” (Matthew, 2:1).²⁷

4.2 Shared Clothing Traditions

Nina Garsoïan made very interesting observations regarding the perfect correspondence between Sassanian representations and fifth-century Armenian texts, illustrating the community of customs, traditions, and even ideology between the two noble classes (Garsoïan 1997, 19-24). We will mention below the hunting scenes, especially on horseback, as one of the testimonies of the common way of life and mentality between Armenian and Sassanid noblemen. Traits of kinship are also present in clothing.

Some elements of costumes of the South Caucasian aristocracy are known to us from the pre-Arab period, thanks to several sculptures. The majority of these pieces of costume (in which the prophet Daniel – in the scene where he stands between two lions – is sometimes dressed) are characteristic of the clothing of Persian aristocracy. This is the case of the heavy cloak with long sleeves hanging empty, corresponding to the *kandys* of the Medes, still worn by the Sassanids, as well as of the tunic with long puffed flanks and arched bottoms, depicted in

27 The representation of the Magi like Sassanid princes is an old and enduring tradition. It is also attested, at about the same time (sixth century) as the Armenian miniature, on a famous mosaic of Sant'Apollinare Nuovo in Ravenna, where their 'Sassanian origin' is evidenced by the dress and caps of the Magi.

Jvari, Ateni (Iberia), Mren and on many quadrilateral stelae [figs 5.2, 5.3].²⁸ The same is true for straight or baggy trousers (the Echmiadzin miniature, Ateni, Jvari, Ptghni, Odzun stelae) and boots that widen at the calf level (Jvari, Mren, possibly Pemzashen, several stelae and a fragment of a plaque from Zvartnots).²⁹

Similar communalities can be observed on headgears. For example the rounded helmet or cap is equally widespread in images of both nobilities members. On the western lintel of Mren church, Christina Maranci has identified a Sassanian *spangelhelm* (segmented helmet) on the head of the right-side donor (prince Davit Saharuni) (Maranci 2015, 61-3). We will examine the attributes often added to the headgears later.

It is important to note that most of the Armenian and south Caucasian sculptures concerned are works created after 628-30, a time when the Persian influence had almost lost its political support. This shows how strong the ancestral ties with Persia/Iran remained.

4.3 Hunter on Horseback (or on Foot)

Hunting, the favourite occupation of Persian kings and princes (as well as banquet), is a frequent motif in Sassanian iconography with hunters often depicted on horseback, and sometimes on foot (Harper 1978) [figs 5.4-6]. Such images were obviously intended to glorify the depicted figures and to highlight their prestige by extolling their courage and strength. The theme is also recurrent in Armenian sculpture, both architectural and on small forms, since early Christian period³⁰ up to late Middle Ages/Modern Times.

The earliest Christian Armenian examples of such scenes include sculptures from Aghtsk, Kasagh, Ptghni (Donabédian 2008, 22-3, 124-5). Given not only the theme, which existed already in Greco-Roman art,³¹ but also several specific features (showing the rider and his mount in a 'flying gallop') and attributes (ribbons, knotted tail³²) characteristic of Persian art, it is generally accepted that such images, especially those of hunters on horseback, have a Sassanian source [fig. 5.4]. In addition,

²⁸ Thierry (1971, 60-5); Donabédian (2008, 108-9, 180-1, 183); Maranci (2015, 63-67).

²⁹ Nina Garsoïan (1997, 17; [2004] 2018) noted: "On the numerous surviving steles Armenian noblemen invariably wear the typical Parthian trousers and characteristic tunic with longer pointed sides as late as the seventh century CE".

³⁰ The same is true for Iberia/Georgia: see Iamanidze 2019, 101.

³¹ Trinquier, Vendries (2009). Regarding the hunter on foot, Sirarpie Der Nersessian notes that this was already a well-known theme of Hellenistic funerary iconography and attested in Armenia itself on engraved seals. See Der Nersessian 1969, 120; 1977, 63.

³² On horses' knotted tail, symbol of power, derived from warriors rituals, see Iamanidze (2019, 102).

as noted above, they reflect a common way of life between Sassanid and Armenian nobilities in Late Antiquity.

One of the most remarkable hunting scenes is sculpted on the western façade of St. Sion of Ateni (Georgia), a church build by Armenian masons (probably mid-seventh c. (Donabédian 2008, 182-4); some authors attribute the sculpture to the tenth c.).³³ It presents a prince on horseback – note the Sassanian ribbon floating behind his head, and the knotted tail of his horse depicted in the attitude of flying gallop [fig. 5.4.2]. The princely hunter draws his bow at three deer, one of which is about to be hit by an arrow, while the second, seized with surprise, turns its head towards the assailant.³⁴ At Ptghni (ca. mid-seventh c.), the horseman (here also the horse has a knotted tail) shooting an arrow at a lion is accompanied by an inscription which names him: Manuel, lord of the Amatunis [fig. 5.4.3].³⁵ Further on the right, a man on foot spears a lion [fig. 5.4.4]. It is proposed to see in these two figures the ancestors of the church's donors, Manuel and his father Parkev Amatuni, who died as heroes in 389 (Donabédian 2008, 124).³⁶ Many other representations of this theme are present from the tenth century onwards, and the subject shows great longevity.

Most of these scenes are related to the funerary domain, which is why they can be seen at the bottom of medieval cross plaques known as *khachkar*, often standing near tombs. They are particularly frequent on the lower part of thirteenth century *khachkars* from Artsakh/Mountainous Karabagh [fig. 5.5]. As Hamlet Petrosyan explains, these images reflect the heavy fate of the local princes, who sacrificed themselves in the war campaigns led by their Mongol lords, to ensure the security of their domains and the survival of the populations living there (Petrosyan 2008, 300-3). At the beginning, real fight scenes were depicted, for example against a big cat. Then, the funerary theme was reinforced, and in particular on *khachkars* of late sixteenth and early seventeenth century from the cemetery of Jugha/Julfa (the largest cemetery with *khachkars* of medieval Armenia, entirely destructed by Azerbaijani authorities), the noble

³³ Aladashvili (1977, 42, 46), although in favour of a seventh century dating, cites (42, fn. 44) the opinion of G. Abramishvili in favour of dating the sculpture during the restoration of the church in the tenth century.

³⁴ Description and brief study (followed by that of the neighboring Senmurv) by Aladashvili (1977, 41-7). See also Chubinashvili 1948, 164; Donabédian 2008, 183-4.

³⁵ See Yovsepean 1944, 14, 28; Arakelyan 1949, 66-8; Der Nersessian 1969, 125; 1977, 55.

³⁶ A detailed analysis of these reliefs is given by Maranci (2015, 208-220).

hunter of the Middle Ages was replaced by a notable or a merchant holding a cross instead of a spear or a bow [fig. 5.6].³⁷

4.3.1 A Parenthesis: Iranianizing *khachkars* of Old Julfa

While we are mentioning the late medieval *khachkars* of the Jugha/Julfa cemetery (province of Nakhichevan, since 1921 part of the Republic of Azerbaijan), an exceptional phenomenon must be highlighted, which concerns the form and decoration of these plaques. Until the great deportation of the Armenians to Iran by Shah Abbas I in 1604-05, the numerous *khachkars* which were produced in Old Jugha city³⁸ during the last decades of sixteenth and the first years of the seventeenth century obeyed a totally new type, proper to this precise place and period. This original type of *khachkar* was marked notably by unusually slender proportions and by a series of Islamizing traits [fig. 5.6]. Some of them were already well-known on Armenian monuments, and in particular on this type of plaque, since the end of the twelfth century, for example the rows of eight-pointed stars, the intricate interlacing and the rich arabesques. But among them were also new elements and ornaments, such as high, deep and narrow niches covered with an ogee arch, and under the cross, in a square compartment separated from it, a circular bulging medallion decorated with a sophisticated arabesque (not to speak about the figuration of the donor/deceased, as mentioned above, holding a cross).³⁹ Because of these new and original features, and because of the city's close ties with Iran at the time, it seems appropriate to qualify those *khachkars* as 'Iranianizing'. However, they had to immortalize the last stay in this place of Iranophile Armenians

³⁷ See Ayvazyan 1984; 1987; 1990; Petrosyan 2008, 222-33.

³⁸ 'Old' in opposition to 'New Julfa', the name of the quarter that the deportees built in Isfahan.

³⁹ This is not the place to deal with another remarkable innovation specific to approximately, at least, two dozens of Old Jugha *khachkars* erected between the last decades of sixteenth c. and the deportation of 1604: the representation, at the top of the plaque, of a hybrid being "composed of a pair of confronted quadrupeds, bodies in profile merging into a single frontally facing and bearded human head" (Baltrušaitis, Kouymjian 1986, 36-42). Let us simply note that each half of the fabulous animal had a large semicircular wing which, together with the opposite symmetrical wing, formed a kind of halo surrounding the central human head. These wings are strongly reminiscent of those found on various animals in Sassanian art, which sometimes formed exactly the same kind of 'halo'.

who were going to be, in inhuman conditions, deported to Iran (see below).⁴⁰

The unique phenomenon of the Jugha *khachkars* can be seen as a forerunner of the architectural and decorative ‘revolution’ that would take place a few decades later in Iran itself, in Isfahan (see below).



Figure 5 Impact of Sassanian prestige images on Armenian art and architecture. 5.1 Echmiadzin Gospel, Adoration of Magi (ca. sixth-seventh cc.). Photo Matenadaran, ms 2374, fol. 229; 5.2 Mren Cathedral, donors on the western lintel (ca. 640). Photo PD; 5.3 Talin, fragment of a four-sided stela (ca. sixth-seventh cc.). Photo PD; 5.4 Four bas-reliefs of hunters: 5.4a Kasagh (ca. fifth c.); 5.4b Ateni, Georgia (seventh or tenth c.). Photos PD; 5.4c and 5.4d Ptghni, south façade, two extremities of a window arch. Photos Hrair Hawk Khatcherian; 5.5 Koshik, Artsakh/Mountainous Karabagh, *khachkar* (1203). Photo Samvel Karapetyan; 5.6 Jugha/Julfa, two *khachkars* now in Yerevan (1599) – photo Armenia History Museum, and in Echmiadzin (1602) – photo PD

40 A part of the Armenian population returned to Nakhichevan in the nineteenth c., but the local authorities of what became in the twentieth c. the Soviet Republic of Azerbaijan would end up driving them out again. This ethnic cleansing was completed, between 1997 and 2009, now under the independent Republic of Azerbaijan, by the annihilation of the entire Armenian heritage of Nakhichevan (see Caucasus Heritage Watch 2022), and in particular by a total destruction of the immense Armenian cemetery at Jugha/Julfa, which contained thousands of *khachkars*, including hundreds of the Iranianizing type just mentioned (see Parliamentary Group Switzerland-Armenia 2006).

4.4 Grape Harvesting

Let us come back to early Middle Ages. The art historian Lilit Mikayelyan has highlighted the close relations that link the figurations of grape harvest in Sassanian and Armenian arts [fig. 6]. This kinship has its roots in the common antique Greco-Roman heritage where the grape harvest motif had a wide spread.⁴¹ Transposed into Christianity, the image of vine scrolls and the theme of grape harvest acquired a Christic, Eucharistic meaning and became the symbol of paradise and eternal life, deserving a wide popularity.

Early Armenian and pre-Arab examples of grape harvest figuration include the lintel fragment of Dvin (sixth-seventh cc.) (Donabédian 1991a, 275, 308, fig. 45) and probably the figures sculpted in the spandrels of the blind arcade on the Zvartnots cathedral's first story (mid-seventh c.) [figs 6.2, 6.3] (Donabédian 2008, 195-7, fig. 386; 223-4, fig. 436). Judging by the tools in the hands of the characters at Zvartnots, these images refer to the semantics mentioned in the gospels, that of the Kingdom of God compared to a vineyard, and the workers and winegrowers who may be worthy of it or be cast out. Later, a famous example is the long vine scroll sculpted on the upper part of the façades of the Holy Cross of Aghtamar (915-21), all around it. The vine scroll houses a wide variety of scenes, some of which are related to the grape harvest [fig. 6.4]. Many are enigmatic in such a context, like the scenes of hand-to-hand combat or of confrontation between a man and a bear.

In Sassanian art, the vintage motif is frequent, in particular on sixth-seventh centuries silver vases [fig. 6.1]. Both arts have inherited from antiquity the same disproportion between bunches of grapes, which are hypertrophied, and human figures, which are significantly reduced. In both cases, the scrolls are inhabited, of course, by grape-pickers, but also by many birds and animals, which symbolize, in Christian context, the souls of the righteous who access paradise and eternal life through the saving sacrifice of Christ. Despite the religious differences between Persians and Armenians, Lilit Mikayelyan invites us to observe a profound iconographic and semantic concordance, based on a probable common paradigm that sees the vine and the grape harvest as symbols of eternal life.

⁴¹ See Mikayelyan 2016; 2023, 72-5; Kazaryan, Mikayelyan 2019.



Figure 6 Grape harvesting in Sassanian and Armenian art and architecture. 6.1 Sassanian silver vase (ca. sixth-seventh c.), British Museum. Photo Bruno Overlaet (1993, 240, pl. 89); 6.2-4: Armenian bas-reliefs. 6.2 Dvin, fragment of a lintel (ca. fifth-seventh c.). Photo Armenia History Museum; 6.3 Zvartnots Cathedral, spandrel of the main blind arcade (ca. 650). Photo PD; 6.4 Aghtamar, Holy Cross church (915-21), south façade, eastern part of the vine scroll. Photo Zaven Sargsyan

4.5 Fantastic Animals

Several Sassanian images of animals have also left their mark on Armenian (and Georgian) sculpted (and painted) decoration [fig. 7]. This includes both fantastic and real animals, fighting against each other, or imposing their power, like predatory birds holding their prey in their talons.

4.5.1 The ‘Pseudo-*Senmurv*’

Among fantastic animals, the so-called *Simurgh* or *Senmurv* – or better, according to Compareti (2019, 17), ‘pseudo-*Senmurv*’ – mainly with a protome of a dog and a body, wings and tail of a bird,⁴¹ most often of a peacock,⁴² is one of the emblematic examples of the spread of Iranian iconography in the medieval Christian (and Muslim) world [figs 7.1-3].

The identification and interpretation of the motif has undergone an evolution from the twentieth century to our days, which has been studied by Matteo Compareti (2006; 2019), and summarized by Hakobyan, Mikayelyan (2018, 40), and by Kazaryan, Mikayelyan (2019, 80-1). It is more or less admitted today that the significance of the ‘pseudo-*Senmurv*’ corresponded, in Sassanian culture, to the concept of *xwarrah* or *farr(ah)*, the divine glory, fortune and divine mandate given to the Sassanid kings. Note that it is from *farr(ah)* that the Armenian name for glory, *p’ark’*, comes (Atjaryan 1979, 482-3; Garsoïan 1989, 552 s.v. *p’ark’*). About the ‘transcendental glory’ of *xwarrah* and its transposition into Christian context, Nina Garsoïan wrote: “With the Christianization of Armenia this royal supernatural quality was transferred to God and His saints”. It is thus probable that, transposed to the decoration of Christian sanctuaries, the pseudo-*Simurgh/Senmurv* kept approximately the same meaning, of divine protection and glory.⁴³

In Armenian and Georgian architectural sculpture and painting, one can mention several examples of this motif [figs 7.1-3], notably on the drum of Echmiadzin cathedral⁴⁴ and on the western façade of Ateni church (seventh or tenth cc.) (Iamanidze 2019, 97), as well as,

⁴² The Armenian word for peacock, *Siramarg* (in certain dialects *Sinamarg*), according to Atjaryan (1979, 219), is borrowed possibly from diverse Iranian words, all linked with Persian *Simurgh*.

⁴³ Garsoïan (1989, 552, s.v. *p’ark’*); Donabédian (2008, 183). On the symbolism and semantics of the pseudo-*Senmurv* and its transfer to the West, in connection with a ninth-century Venetian mosaic, see also Riccioni (2024, 60-3).

⁴⁴ First time published and studied by Kazaryan (2007, 89-90 and 97, fig. 86), with a presumed dating to the sixth-seventh centuries, then more precisely to ca. 620, notably in Kazaryan, Mikayelyan (2019, 81, fig. 6, our fig. 7.1).

much later, on one of the mural paintings of the Ani church of Tigran Honents (thirteenth c.).⁴⁵

4.5.2 Other Fabulous Animals

Representations of various fantastic animals, very probably borrowed from Sassanian works of art or inspired by them, can be found on numerous pieces of medieval Armenian and Georgian art [figs 7.4-8]. Particularly impressive are the richness and diversity of the bestiary carved on the façades of the Holy Cross of Aghtamar (Vaspurakan, 915-21, southern Armenia, today eastern Turkey) [figs 7.4a, 7.5]. The majority of these imaginary creatures are interpreted as apotropaic symbols, and are presumed to express and manifest the divine protection expected for the neighboring human figures. Such was the Aghtamar sculptor's taste for fabulous animal combinations of Persian origin that he transformed the whale of Jonah's story into a monster "derived from the Persian *Senmurv*" (Der Nersessian 1965, 33; see also Kazaryan, Mikayelyan 2019, 82) and gave it a magnificent, purely Sassanian, double-curved wing [fig. 7.5]. Another Sassanian feature, a garland of pearls, is also present on the wing, marking its lower contour on the body of the whale (see below the passage devoted to attributes).

Some of the fantastic animals with Sassanian roots, present on medieval Armenian and Georgian monuments, seem to be loaded with a specific significance uniting force, majesty and wildness or mystery. One of them is the griffin, a hybrid creature combining a lion's body with a bird's head, wings and tail. Imposing examples are carved on Aghtamar (915-21) and Samtavisi (Georgia, 1030) churches [fig. 7.4]. Another one is the sphinx – a winged lion, with a human head and bust, whose image is sculpted on eleventh and thirteenth centuries monuments [fig. 7.6].

All these images passed also from Sassanian to Islamic repertoire, then to western European art, thus becoming common to Armenian-Georgian, Muslim and European decorative vocabularies. Conversely, Jurgis Baltrušaitis, who had firstly shed light on the Sassanian origin of several of these creatures and of their modes of representation in Armenian and Georgian arts (Baltrušaitis 1929), then looked for much older Middle Eastern roots to these compositions by returning to Sumer, thus revealing their great

⁴⁵ For other examples and more detailed analyses, see Hakobyan, Mikayelyan (2018, 41-6).

antiquity (Baltrušaitis 1934), curiously without stressing – in that study – the intermediary role obviously played by Sassanian art.⁴⁶

From the point of view precisely of the intermediary role attributed to Sassanian models, the motif of the whale in Jonas' story is significant. In a study devoted to the fabulous cetacean *ketos* of Greco-Roman antiquity, which entered the Christian repertoire to represent the whale that swallowed and then spat out the prophet Jonah, Stefano Riccioni examined the variations and metamorphoses undergone by the image of this aquatic monster (Riccioni 2016). Among them, he observed the canine or leonine shape acquired by its head and anterior paws, and the transformation of its lateral fins into wings. In this regard, Riccioni explored the relationship between the whale of Aghtamar in Armenia (915-21) and those represented on the ambos of the cathedrals of Ravello and Minturno in Campania (eleventh-twelfth cc.), searching possible Sassanian roots for the three of them and more precisely an influence of the *Senmurv* (Riccioni 2016, 141-2). He rightly highlighted the deep Greco-Etrusco-Roman antique roots of the various versions of the monster, thus counterbalancing the hypothesis of a contamination by Sassanian representations, while not completely excluding it. Indeed, both the 'S'-shaped double curvature of the wing in the three pictures and the pearled crescent at its bottom at Aghtamar and Minturno (see below our remarks on these two traits) leave little doubt about the Sassanian origin of this figuration, even if its transmission could have happened later, via Islamic works.

At the same time, it is essential to acknowledge that many combinations of the same elements had already taken place in a distant Middle-Eastern and Greco-Roman antiquity, from which subsequent cultures, both in the West and the East, have equally inherited.

46 This omission is all the more surprising that J. Baltrušaitis published a little later a study devoted to Sassanian stucco: Baltrušaitis (1938-39).



Figure 7 Fabulous animals on Armenian churches, inspired by Sassanian models. 7.1-3: Pseudo-*Senmurv* in Armenian sculpture and painting. 7.1 Echmiadzin Cathedral, northern side of the drum (seventh or tenth-seventeenth cc.). Photo A. Kazaryan and L. Mikayelyan; 7.2 Ateni (Georgia), St Sion church, west façade (seventh or tenth c.). Photo PD; 7.3 Ani, St Gregory of Tigran Honents (1215). Photo PD; 7.4 Griffin: 7.4a Aghtamar, Armenia (present-day Turkey), Holy Cross church (915-21), south façade. Photo Zaven Sargsyan; 7.4b Samtavisi, Georgia, eastern façade of the church (1030). Photo PD; 7.5 Aghtamar, Holy Cross church (915-21), south façade. Jonas' whale «contaminated» by the Sassanian pseudo-*Senmurv*; 7.6 Sphinx on Armenian churches. Photos PD: 7.6a Haritj monastery, eastern façade of main church (1201), south extremity; 7.6b Makaravank monastery, western portal of the narthex (before 1224)

4.6 Predatory Quadrupeds and Birds

The motif of a predatory quadruped attacking another animal [figs 8.1 to 8.6], frequent in Sassanian art since its beginning (again with much older roots), was also present in early Christian Armenia since the fourth century (mausoleum of Aghtsk, impost of Tzob...). Given the similarity of compositions, a Sassanian origin or kinship seems likely. Together with the image of a bird grasping its prey in its talons, it became quite common in Armenian architectural sculpture of the tenth-fourteenth centuries.

In the medieval context, these motifs have often been interpreted as heraldic symbols, i.e. the coat of arms of princely families [figs 8.2-6]. However, in medieval Armenia, the same composition is often found on monuments built by different dynasties, which contradicts the

obligatory notion of a single symbol specific to each family (Avetisyan 2023, 33-4). It therefore seems more plausible to attribute to such figurations a more general symbolism, which may be common to all dynasties. It could be, for example, the glorification of princely power as a whole. Thanks to the presence of its sign on the façade of a church, this power was both placed under divine protection and reinforced in the eyes of the local community.

For the early Christian period, another interpretation, based on a paradigm common in the Psalms, might probably be more appropriate - such an image could symbolize the dangers that threaten sinners and from which believers ask God to be delivered (Donabédian 1991a, 272-4). This meaning is particularly clear when the pictures of attack by a wild cat are contrasted with peaceful scenes from which they are separated by the cross. The right jamb of the door of the Aghtsk mausoleum (years 364-68) is quite enlightening in this regard [fig. 8.1].

It is possible that this motif changed its symbolism in the Middle Ages and acquired, as suggested above, a little more profane meaning of an image of strength and power against enemies, thanks to divine protection. But clearly, the previously imagined heraldic function seems very unlikely.

4.7 Row or Group of Birds in Circles, and Row of Sassanian-style Ewers

Another theme frequent in Sassanian decorative repertoire and present on one Armenian church of the seventh century is the row or group of birds in circular medallions [figs 8.7, 8.8]. In Persia, it appears on Sassanian stucco plaques, silver vases (carafes, flasks), dishes and fabrics.⁴⁷

In Armenia it can be seen only once, in a rather unusual disposition: on the left part of a pair of arches that surmount two paired windows, on the northern façade of Ptghni church, western part (mid-seventh c.) (Donabédian 2008, 124-5). Two rows of birds converge towards a central medallion featuring a cross pattée (fig. 8.7 - only the right part is visible). This depiction is likely an original interpretation of the motif of the two doves approaching the cross, symbolizing the souls' aspiration for salvation. But it also seems to be 'contaminated' by Sassanian artifacts. However, instead of Persian medallions, each of the birds is placed under a small horseshoe arche (very close to a circle), all the arches forming a row on the arched band above

⁴⁷ See for example Trever, Lukonin 1987, 115, n° 27, figs. 79-83; 116-7, n° 32, figs. 98; Overlaet 1993, 155, n° 13; 218, n° 70; 278-9, n° 129.

the left-side window.⁴⁸ At Ptghni, the birds include pheasants, quail, doves, partridges, ducks, geese, peacocks and eaglets.

It is true that the depiction of birds and other animals in vine tendrils is a common motif in early Christian art, especially in the Holy Land mosaics, with an obvious paradisiacal symbolism. One example is the mosaic from Jerusalem, previously in a Chapel near Damascus Gate, now transferred in the Mardigian Museum of the Armenian Patriarchate. On this impressive pavement, probably the work of local artists, but crowned with a beautiful Armenian inscription (ca. sixth c.),⁴⁹ one of the earliest uses of the Mashtots alphabet, more than forty birds are depicted. These may symbolize the souls of deceased Armenians “whose names the Lord knows”, as indicated by the inscription.

Nevertheless, by the species of birds and their diversity, as well as by their disposition inside circles (or almost so), the Armenian formula of Ptghni is very close to Sassanian works.⁵⁰ The presence of this window arch with very likely Sassanian kinship is certainly not a coincidence. Indeed the church of Ptghni shows a close relationship with the Sassanian heritage since, in addition to the mentioned row of birds and to the two hunting princes [figs 5.4c, 5.4d], it has an exceptional row of carafes/ewers with clear Sassanian affinities.

On the western part of the north façade of the church, just above the birds arch, a row of sixty (!) vases is carved [fig. 8.8]. This is the only known case in Armenia of vases arranged in a horizontal row on a cornice at the top of a façade (Donabédian 2008, 256). The vases present both a certain diversity and homogeneity. Belonging more or less to the type of wine jug called in Greek antiquity *oinochoe*, all are elongated, have a moderately rounded body and a narrow neck. Two subtypes can be identified, one in the shape of a simple vase, without handle, a kind of bottle as we see many in Sassanian toreutics, and the other with a handle and a pointed spout, a shape very characteristic of some of the most elegant Sassanian silver carafes/ewers. All those belonging to the second subtype are turned to the left, which seems to show a general sacred orientation of the whole row.

48 It was certainly intended that the series of birds would continue on the right arched band. However, the sculpture remained unfinished. It is noticeable that the surface of the flat spaces under the small horseshoe arches on the right is at a higher level than on the left row: it was also scheduled to be carved.

49 Based on comparisons with similar local works, Sirarpie Der Nersessian (1977, 67-71) suggests dating the mosaic to the sixth century. For his part, based on an epigraphic study, Serge Mouraviev (2010, 123) places the inscription in the second half of the fifth century. Michael Stone, the best expert on Armenian inscriptions in Jerusalem, leans toward a dating in the sixth century (Stone 2002, 216-17).

50 Having studied in detail this row of birds at Ptghni, Christina Maranci (2015, 220-8) also considers possible a link with Sassanian decorations.

As to the meaning of this ‘decoration’, Nikolai Tokarskii suggests that liturgical vessels are depicted (Tokarskii 1971, 146). We can expand on his thought by adding: with an Eucharistic symbolism (whence their orientation towards the east). This is probably also the case for the vases of a very similar type carved in the eleventh century on the altar elevation of the Tsakhats Kar church (province of Vayots Dzor, Republic of Armenia) (Donabédian 2008, 256, fn. 145; Maranci 2015, 230, fig. 3.24). In her study of the Ptghni cornice, concerning its semantics, Christina Maranci adopts the Eucharistic hypothesis and very pertinently adds to it the notion of ceremonial banquet, which was, at the Sassanian court, a mark of prestige, as well as that of funeral banquet, which was cited in early Christian Armenian sources (and is still practiced – more modestly – today) (Maranci 2015, 233-5).



Figure 8 Predatory animals, birds and ewers on Armenian monuments, inspired by Sassanian models.

8.1 Aghtz, mausoleum of the Arsacids, right jamb of the door (364-8). Photo PD; 8.2 Aghtamar, church of the Holy Cross (915-21), south façade. Photo Hrair Hawk Khatcherian; 8.3 Sb Geghard/Holy Lance monastery, Prroshians' mausoleum (1283), north wall. Photo Hrair Hawk Khatcherian; 8.4 Sb Geghard/Holy Lance monastery. South façade of the main church (1215). Photo Hrair Hawk Khatcherian; 8.5 Makaravank monastery, west portal of the narthex (before 1224); 8.6 Sb Geghard/Holy Lance monastery. South façade of the main church (1215), portal. Photo PD; 8.7 Ptghni, church (640s), northern façade, western part. Double arch above the last pair of windows. Photo Zaven Sargsyan; 8.8 Ptghni, church (640s), northern façade, western part. Lower cornice, row of ewers. Photo Zaven Sargsyan

4.8 Plant Motifs

As Lilit Mikayelyan has shown in her articles, close links exist between Sassanian and Armenian representations of plant motifs (based on Greco-Roman models), in particular the leaves of acanthus and palmette (the same concerns, to a certain extent, the vine stock and fleur-de-lys motifs) (Mikayelyan 2015; 2023). For his part, the author of these lines suggests considering the S-shaped, double-curved design of the leaves at the foot of certain Sassanian and Armenian figures, a design also found on the wings that often accompany images of Sassanian princes, as well as animals. In early Christian Iberian sculpture, Nina Iamanidze has observed a widespread use of the Sassanian motif of the tulip in the hand of a noble figure, aimed at emphasizing her or his high rank (Iamanidze 2019, 98-100).

4.8.1 Acanthus Leaf, Palmette, Half-palmette

The acanthus and palmette motifs [fig. 9], which have deep antique roots, were widely used by Sassanian and Armenian artists of the early Christian centuries. In both traditions, these motifs, often very close to each other, received similar stylizations and uses. For example, they are similarly arranged in a horizontal row, attached to each other at their feet by concentric curved fluting, at the edge of Sassanian vessels and on Armenian window arches (Talin cathedral, seventh c. – fig. 9.2). The same ornament, more schematized, once present on Sanahin monastery's main church (Armenia, 966-72 – fig. 9.3), was in turn widely used in the tenth-eleventh centuries on the churches of the Tayk/Tao province, west of Armenia, south-west of Georgia.

In the same way, very similar scrolls of half-palmettes in alternating arrangements (facing successively upwards and downwards) can be found on Sassanian toreutics and stuccos, as well as on Armenian window arches (Penzashen – fig. 9.1 – and Zoravar churches, seventh c.). Finally, according to a formula inherited from Hellenistic and late Roman art, in both traditions, the acanthus/palmette is often placed at the base, in support of a figure, a person of royal rank in Persia, saints and princes involved in religious history, in Armenia. This is notably the case at the foot of several crosses and cruciferous quadrilateral stelae of Armenia [figs 9.4 to 9.11].

Sassanian-Armenian parallels are not limited to iconography and stylistics, but as Lilit Mikayelyan points out, also concern semantics and symbolism. In both traditions, the acanthus and the palmette have more or less the same meaning, linked to notions of triumph, prestige, sacredness, as well as victory over death, eternal life and paradise. In the East, since antiquity, the palm tree has represented the tree of life (Mikayelyan 2015, 226; 2023, 70). This is why, to symbolize the

saving and life-giving power of the cross, half-palmettes often grow from its foot or base in Armenian art.

4.8.2 Leaves (and wings) with S-Shaped pattern

Among Sassanian plant motifs, the S-shaped pattern of the pair of curved leaves under some animals [pl. 9], very close to that of the pair of wings on the kings' and princes' crowns and, again, on certain animals, may have played a decisive role in the elaboration of an important symbolic and decorative Armenian composition. The paradigm of the life-giving cross manifests itself very naturally in early Christian art (in general) by the representation of vegetable shoots 'growing' from the foot of the cross. In Armenia, probably not earlier than in the fifth c. (the dates are uncertain at this high period), these shoots very often take the form of two leaves (half-palmettes, as we wrote above) symmetrically curved in an S [figs 9.4, 9.7 to 9.11, 9.15]. On many Armenian examples which are probably not prior the fifth-sixth centuries, the S curvature is not complete.⁵¹ The design is really clear on pieces obviously belonging to the seventh century.⁵² Under some crosses of the seventh century (Agarak, Arutj and Ptghni in Armenia, Tsromi in Georgia), there is not one pair of S-shaped leaves, but two pairs, superimposed.

In all probability, the double curvature of the leaves and wings appeared in Persia since the beginning of the Sassanid period. Consequently, it likely predates the S-shape of the Armenian leaves. If this is indeed the case, it could be the origin of the Armenian motif. Such a presumed legacy is all the more important that the same pattern was transmitted, some centuries later, from the mid-ninth century, to the *khachkar*, a type of sacred artefact emblematic of Armenian faith and identity. Above-mentioned examples of Sassanian S-shaped wing on Armenian and Italian representations of Jonas' whale from the tenth-twelfth centuries confirm the longevity of this paradigm.

⁵¹ For example: Dvin, capital of quadrilateral stela; Dvin, lintel, presumably of St. Gregory cathedral; Kasagh, lintel of the south façade, east side; Kasagh, impost of small engaged pilaster; Mughni, base of a quadrilateral stela, and the stela itself; Tigranakert of Artsakh, two carved images of a cross; Zovuni, lintel of mononave chapel.

⁵² For example: lintels of doors of Agarak, Bjni, Karenis, St. Hripsime (west), Voskepar, Zoravar of Yeghvard; Dvin, small stone cross from a quadrilateral stela; Dvin, capital with Christ's medallion on a cross; Talin, cubic base of a quadrilateral stela; Yereruyk, cubic base of a quadrilateral stela: under the cross of one of the four faces, the form is clearly designed, but on the opposite face, the leaves of the cross are not fully S-shaped.

4.9 Attributes and Geometric Ornaments

4.9.1 Ribbons, Wings, Necklaces, Wreaths, Crowns...

The ribbons and wings on Sassanian images of kings, princes and (probably sacred) animals, including birds, have massively migrated from Sassanian sculptures, silver plates and vases to early Christian Armenian and more generally south Caucasian figurations of donors⁵³ (eastern façade of St. Sion of Ateni) and their ancestors (in hunting scenes notably), crosses, animals and birds. Many figurations of crosses pattée in a medallion, with ribbons and sometimes wings rising from their foot can be found on capitals, lintels and stelae from that early period [figs 9.5 to 9.9]. Sassanian ribbons attached to birds' neck are also present on several capitals, impostes, bases and a clay plaque from early Christian Armenia [figs 9.12 to 9.14], Caucasian Albania (Aghouank) and Iberia, and still at the beginning of the tenth century, on cornices of Aghtamar Holy Cross church [fig. 9.15]. Some sculptors show an imaginative interpretation of the ribbon by having it go around the cross from above [figs 9.5, 9.6], in a deformation of the traditional medallion's ring. Some others combine ribbons and wings. On a fragment of impost (capital of an engaged pilaster) from Yereruyk, the artist has added a bunch of grapes to the end of a ribbon, itself attached to the neck of a stylized peacock [fig. 9.14].

Ribbons, necklaces, wreaths and crowns, heirs of antique near-eastern traditions, were widely used in Sassanian iconography, applied not only to high ranked personages, such as kings and princes,⁵⁴ but also to animals, both real and fantastic, and birds. According to Lilit Mikayelyan, they had a rich semantic and symbolic content. They allowed, on the one hand, to emphasize the prestige of the figures depicted, the extent of their power, and on the other hand, to create around the animals and birds endowed with these attributes, an aura of sacredness and protection (Mikayelyan 2022; 2025-6). The same attributes are very common in Armenian and Georgian sculpture of the sixth-fourteenth centuries, again on images of representatives of the ruling elite, and of real and fabulous animals and birds [fig. 7]. We mentioned earlier the Sassanian beaded garland that underlined the attachment of the curved wing on the body of Jonah's whale, at Aghtamar (915-21). Such rows of holes (pearls) are omnipresent on

⁵³ On the eastern façade of St. Sion church of Ateni, a shortened and rounded variation of a ribbon is attached to the helmet or cap of two patrons (who wear a kind of *kandys*).

⁵⁴ In this respect Nina Garsoïan (1997, 23; [2004] 2018) wrote eloquently "the hunting king, on horseback, wearing all his supernatural attributes - the halo, the crescent moon set on his crown, and the symbolic floating ribbons of the *xwarrah* - unmistakably displayed the full majesty of his glory".

animals and birds sculptures on Aghtamar's façades. Particularly popular in the Middle Ages, griffins, sirens and sphinxes were Sassanian necklaces and crowns. According to L. Mikayelyan, they were probably seen as messengers carrying a protection assured by the celestial world to which they belonged. Their presence over the centuries reveals the profound influence of the Sassanian artistic repertoire on Christian cultures of the South Caucasus.



Figure 9 Plant motifs, ribbons and wings on Armenian monuments. 9.1 Pemzashen, St George church (640s), north façade. Photo Hrair Hawk Khatcherian; 9.2 Talin Cathedral (probl. 689-93), western façade. Photo PD (1976); 9.3 Sanahin monastery, St Savior church (966-72), western façade. Survey by Shmavon Azatyan (1987, n° 7); 9.4 Sanahin monastery, capital-shaped upper part of a four-sided stela (ca. sixth-seventh cc.). Photo PD; 9.5-9: Five early Christian Armenian crosses with ribbons or double-curved wings/leaves. 9.5 Avan church near Ashtarak, south support of triumphal arch (ca. fifth-sixth cc.). Photo PD; 9.6 Tekor, St Sergius church (probl. 480s), west façade. Photo Nikolai Marr (probl. 1907); 9.7 Kasagh basilica. Impost with a cross flanked by two wings (ca. fifth-sixth cc.). Photo PD; 9.8 Tzitzernavank basilica. Cross pattée in a medallion with two lateral wings/half palmettes (ca. sixth-seventh cc.). Drawing after Murad Hasratian (2000, 114); 9.9 Mughni monastery, fragment of four-sided stela on cubic base, with crosses pattées flanked or preceded by two wings (ca. sixth-seventh cc.). Photo PD; 9.10 Voskepar, Holy Mother of God church (seventh c.). Lintel of south door. Photo PD; 9.11 Talin, eastern face of four-sided stela. Two S-shaped half-palmettes «growing» from the foot of a cross. Photo PD; 9.12 Aghtzk, mausoleum of Arsacid kings. Brick plate (ca. fourth c.). Peacock with Sassanian ribbons attached to its neck and wings. Reconstruction from fragments by Aram Kalantaryan (1975); 9.13 Pashvants/Pashvatzk, Vaspurakan (present-day Turkey), single-nave church (ca. fifth-sixth cc.). Impost, image of an eagle or peacock bearing ribbons attached to its head and legs. Two photos by Chantal Hotellier and Zaven Sargsyan, adjusted by PD; 9.14 Yereruyk, impost (ca. sixth c.). Peacock to whose neck a Sassanian ribbon is attached, prolonged by a bunch of grapes. Photo PD; 9.15 Aghtamar, Holy Cross church (915-21), cornice of west façade. Therianthrope combining human head, bird's wings, and feline's legs, with Sassanian wings and ribbons. Photo Hrair Hawk Khatcherian

4.9.2 Geometric Ornaments

A Sassanian origin has been considered for a series of geometric ornaments sculpted (and for one of them, painted) on Armenian monuments of early Christian (fifth-sixth centuries), pre-Arab (seventh centuries), and for some of them, medieval periods [fig. 10]: row of small arches (which may come from the arcade hollowed out on the entrance arch of the palace of Ctesiphon), row of 'hearts', row of intersecting circles equivalent to a row of shuttles/almonds in an X shape, and for its horizontal half, to a row of shuttles/almonds in a zigzag pattern, very often with a bead lodged between them [fig. 10.1] (Donabédian 1991b, 133). The row of intersected circles can also be interpreted as a row of circles enclosing four petals arranged diagonally (Mikayelyan 2023, 75). Of very ancient origin, it is present in various Sassanian ornaments, and can often be seen in Armenia (and Georgia), on quadrilateral stelae datable to the fifth-seventh centuries, on seventh-century window arches and on monuments from the tenth-eleventh centuries [figs 10.3 to 10.5] (Mikayelyan 2023, 76). It is disposed not only in longitudinal rows, but also in large panels. This motif is also sometimes found in painting, for example on the intrados of the apsidal window in the Yereruyk basilica (ca. sixth c.), and on later monuments (Donabédian 2020a, 94-6).

Another geometric ornament of antique origin, shared between Sassanian and Armenian ornamental arts, is the meander or row of svastikas, again arranged either in horizontal belt or in larger rectangular pannel. However this motif, often attested in Sassanian decors, in particular on stucco pannels [fig. 10.2], remained rare in early Christian Armenian art. Its real propagation started later, after the fall of the Sassanid realm, during the tenth-eleventh centuries, in particular in the Bagratid kingdom of Ani and surroundings [figs 10.6, 10.7] (Mikayelyan 2023, 76-8). At the time, the row of svastikas was often included in the large pannel type. Based on the Sassanian heritage, its new favour was probably linked to the establishment of the Arab caliphate. It then benefited from the favour accorded to the rich compositions of 'carpets' combining vegetal and geometric motifs, now propagated within the framework of the caliphate, but still bearing the stamp of the Sassanian heritage.

A more general, technical remark can be made concerning the stucco panels just mentioned, so common in Sassanian wall decorations. Despite the difference in material from the stone used in Armenia, notably volcanic tuff, we cannot help but notice a similarity in the bevelled treatment of the edges of the sculpted ornaments, particularly in the frequent cases of stylized representations during the early Christian period. The resulting grooves, highly conducive to contrasts between light and shadow, are strongly reminiscent of the incisive treatment of Sassanian ornaments on stucco panels. The

same characteristic can be seen on Coptic sculpted motifs from the same period.



Figure 10 Shared Sassanian and Armenian geometric ornaments. 10.1 and 10.2 Sassanian stucco plaques from Ctesiphon (ca. fifth-sixth cc.) with row of X-disposed shuttles and with two bands composed of «svastika» meander. Photos Metropolitan Museum of Art; 10.3-5: Shuttles forming an X, on Armenian monuments. Photos PD. 10.3 Arutj Cathedral (662-66). South façade; 10.4 Sisian, St John church (670s-680s). South façade; 10.5 Ani Cathedral (989-1001). South portal; 10.6-7: Rows and networks of svastikas. 10.6 Marmashen monastery, main church, eastern window (1029) Photo PD; 10.7 Horomos monastery, *gavit* (1038). SW internal plaque of the dome. Photo Hrair Hawk Khatcherian

5 North-Iranian Tomb Towers of Eleventh c. Between Armenian and Seljuk Architectures

5.1 Some Still Obscure Questions

In the study of the age-old exchanges between Iranian and Armenian architectures, one question has remained in the shadows: the possible relationship between these two schools with regard to turriform mausoleums. It was briefly addressed, in a theoretical and preliminary manner, in a communication by Armen Kazaryan and Shakir Shukurov (Kazaryan, Shukurov 2015). Yet this question is particularly relevant when we consider the close links between the Seljuk and post-Seljuk mausoleums of Asia Minor (and western Armenia), known in Turkish as *türbe* or *kümbet* (twelfth-fourteenth cc.), and the characteristic forms of Armenian religious architecture. Let us remind that the *türbe* seems to be a transposition on the soil, of the drum and dome of Armenian (and Georgian) churches. In both cases, the form – a cylindrical drum surmounted by a conical (or umbrella-shaped) dome, or a polygon covered with a pyramidal dome, the decoration of the drum – often a blind arcade, and the ribs on the dome's roof – a reminiscence of antique Roman tiles,

are almost identical. This kinship is reinforced by the community of volcanic stone material and of structure, including the old principle of a funerary chapel on an underground vault, which dates back to the early Christian period.⁵⁵

The origin of the *türbes* built in Anatolia during the Seljuk and Mongol periods has been the subject of various hypotheses, one of which, often cited in specialized literature, invokes presumed traditional funerary practices of the Turkic and Mongol populations of Central Asia, and possible imitation of Turkic or Mongol tents.⁵⁶ However, apart from its weak argumentation,⁵⁷ this hypothesis seems to have two shortcomings: a) it ignores the close relationship indicated above between the *türbes* and Armenian architecture, b) it ignores the existence, in northern Iran, before the arrival of the Seljuks, of funerary constructions which have deep local roots (see below) and already possess many of the features later present in the *türbes*.

5.2 The Samanid Mausoleums in Bukhara and Tim (Tenth c.)

To understand the importance of these pre-Seljuk forms, we must begin by remembering that, after the submersion of the Near and Middle East by the Arab-Muslim wave, Iranian culture, remaining very dynamic, did not weaken, but on the contrary, conquered new spaces by adapting and enriching itself with astonishing innovations. Thus, during the ninth-mid-eleventh centuries took place what is usually called the Persian Renaissance (Loukonine, Ivanov 2003, 33-6).⁵⁸

In architecture, the role played by the brilliant Samanid dynasty of Khorasan, said to descend from the Sassanids, is remarkable. In Bukhara (Transoxiana was then the centre of their domains) in the first half of the tenth century was built the famous mausoleum of Ismail Samanid, both faithful to the Persian Zoroastrian tradition and masterfully innovative (Pope [1969] 1976, 42-4; Ettinghausen, Grabar 1987, 217-20; Hillenbrand 2021, 110-11). Its architecture is based on the structure of the fire temples,⁵⁹ with a dome on a cube through

⁵⁵ On these questions, with bibliography, see Donabédian 2020b, 83-5.

⁵⁶ On the hypotheses related to the origin of the *türbe*, see Michailidis 2015, 145-6 ; Donabédian (2020b, 83-5).

⁵⁷ On the limits of the tent theory, see Adle, Melikian-Chirvani 1972, 287, fn. 1.

⁵⁸ The eastern and northern regions played an important role in the new flourishing of Iranian culture. Particular attention is currently being given to the northern province of Tabarestan/Mazandaran (which we will discuss in terms of its rich architectural creativity) in light of new archaeological investigations: see Abedini Iraqi, Dan 2025.

⁵⁹ According to the concise formula of Hillenbrand (2021, 111), “a fire temple in an Islamic dress”.

unusually articulated squinches. Its decoration, using all the resources offered by small baked bricks, is of unprecedented diversity.

This mausoleum has four portals (one in the centre of each façade) with a first arched frame inscribed in a second, rectangular frame. Although they do not protrude on the façades, these portals can be seen as relatively early representatives of a long lineage that would develop, after a further step taken by the same dynasty in the mausoleum of Tim (see below). This would lead to the propagation of the type of large salient portals called *pishtaq*, in a wide area stretching from Anatolia to India.⁶⁰ Belonging to the same lineage, many portals with a similar principle of double frame (but not so protruding), appeared in Armenia from late twelfth until mid-fourteenth century (Azatyan 1987, 19-21 and numerous illustrations). At the same time, the same design, more richly ornamented, was applied on constructions commissioned by the Seljuks in Anatolia.

A few decades after Bukhara's mausoleum, in 977-78, another member of the Samanid dynasty, Nuh Mansur (976-97), had in turn erected in Tim, in the province of Samarkand, a brick mausoleum with a dome on a cube, known as Arab Ata, also quite innovative. Although relatively modest in size, the Arab Ata mausoleum was to leave a deep and lasting mark on the development of Muslim architecture, including funerary architecture, thanks to two new features (Ettinghausen, Grabar 1987, 219-21, in particular 220, figs. 223 and 224). The first is a previously unknown treatment of the main façade, with a portal of the same composition as its predecessor in Bukhara: a first frame covered by a high pointed arch, inscribed in a rectangular frame, but with unprecedentedly enlarged dimensions. This new portal is amplified to such an extent that it occupies the entire façade, and even exceeds it in height, thus hiding the dome behind it. This can be seen as the birth of what is called the *pishtaq* which would henceforth become the norm throughout the region.

The second decisive contribution of Arab Ata is the very original type of squinches used for the transition from base to dome. This new kind of squinch is made up of four niches, two superimposed rounded niches 'hollowed' in the masonry, and, on both sides of the lower one, two pointed and protruding half niches. The latter are a precocious and elementary form of stalactite (*muqarnas*). In other words, in addition to the appearance of the *pishtaq* portal, the mausoleum of Tim offers in the same device, at the same time, a prototype of what shall become the 'trilobed squinch' (see below) and prototypes of *muqarnas*. These innovations were to gain innumerable followers.

⁶⁰ The first known example of such a portal is in the fortress of Ukhaidir, Iraq, datable to the late eighth c.

5.3 The North-iranian Tomb Towers (eleventh c.)

After the mausoleums of the Samanids built beyond the traditional borders of Iran, at the beginning of the eleventh century, turriiform mausoleums of an apparently new type, known in literature as ‘tomb towers’, began to ‘grow’ one after the other, this time in the north of Iran proper [fig. 11].⁶¹ The Zoroastrian Sassanian origin of these turriiform tombs has been clearly presented by Ch. Adle and A.-S. Melikian-Chirvani (Adle, Melikian-Chirvani 1972). Their principle is based on the Zoroastrian funerary customs of Sassanid kings and princes. This is evidenced, for example, by the request of king Khosrov I Anushirvan (r. 531-79), reported by the famous Persian poet Ferdowsi (early eleventh c.), to have “a tomb built for him in a solitary place”, with “an inaccessible door in the vault of the sepulchral chamber”. This is confirmed by a testimony that this tomb was a *gonbad* (= a domed mausoleum) built on a mountain. Several attestations of this tradition appear in Persian medieval texts. Moreover, the mountainous region of Tabarestan, where these constructions multiplied, remained strongly attached to Zoroastrian traditions in the Middle Ages.

5.3.1 Gonbad-e/Gunbad-i Qābus (1006-07)

The first and most impressive is the tower of Gunbad-i Qābus [fig. 11.1], erected in 1006-7. Made of baked bricks of exceptional quality, its 52 m high cylindrical body, slightly reduced upwards, is equipped with ten triangular protruding edges/buttresses, which give it a striking vertical momentum. The verticality of the edifice is enhanced by its position on a 10 m high artificial hill and by the conical dome which crowns it, a little wider than its base. With its extreme sobriety and purity of lines, this volume, projected, one might say, towards the sky, has a remarkable power of expression.⁶² Sheila Blair rightly points out a trait modest by its size and treatment but important for the history of Islamic architectural decor: its “single entrance doorway [...] is surmounted by trilobed niches, some of the earliest evidence for the development of the *moqarnas*, or stalactite vaulting, in Persia” (Zanjani et al. [2002] 2013).

⁶¹ A brief history of the scholarship on these monuments is proposed by Michailidis (2015, 145-6). André Godard studied two of them, Lajim and Resget (1936), and provided a list of the oldest ones (1949, 259).

⁶² The Gunbad-i Qābus tower is mentioned or studied in many publications on Islamic art and architecture. See for example Ettinghausen, Grabar (1987, 221-2).

Prince Qābus ibn Voshmgir (r. 978-1012), who had this mausoleum built for himself, belonged to the dynasty of the Ziyarids and was also a Bavandid (see below) by his mother (Michailidis 2015, 136). Recently converted to Islam (early tenth c.), the Ziyarids, like the other dynasties of the region, were still attached to their Zoroastrian heritage. The presence in the inscriptions on the tower of texts non only in Arabic, but also in Pahlavi, the language of the Sassanian period, and the use of the Persian solar calendar reflect this fidelity. These inscriptions leave no doubt about the funerary function of the edifice, nevertheless, like the other tomb towers of the group, it does not include an hypogeal vault, neither a simple tomb stone, which means that there was no burial inside the tower neither under it.⁶³ This exceptional monument is the first of several dozens more or less similar (but much lower) constructions that would follow one another over the centuries, and probably their partial prototype.

5.3.2 Mil-e Radkan or Mil-i Gharb (1016-21)

Five related tomb towers built during the first half of the eleventh century, before the Seljuks settled in Iran, are also located in the northern region. Three of them are found in the province of Mazandaran, called Tabarestan at that time, between the Caspian sea shore and the Elborz range. All of them are made of baked brick and have a cylindrical volume. It is generally assumed that they were all initially topped with a conical roof, a point that is actually not so clear for some of them. Three have, in addition to an inscription in Arabic, another (complete or partial) one in Pahlavi.

Mil-e Radkan or Mil-i Gharb (1016-21) is the mausoleum of Mohammad ibn Vandin Bavand, a prince of the local Bavandid dynasty [fig. 11.2]. The Bavandids claimed a Sassanian descent and ruled (with interruptions) the Tabarestan region from seventh to fourteenth centuries (Madelung [1984] 2018; Michailidis 2015, 136-7). They converted to Islam in 841, but the majority of their subjects remained Zoroastrian for centuries. Like in the Gunbad-i Qābus, this is reflected notably in the dedicatory inscription of the monument, where to an Arabic text are added Pahlavi letters.

With a height of 35 meters, this tomb tower is the tallest of the region after Gunbad-i Qābus. Like the latter, it has preserved the conical cover of its dome. As in two other similar constructions of the

⁶³ Ettinghausen, Grabar (1987, 221), as well as Hillenbrand (2021, 110), explain that the coffin of the deceased could have been suspended inside the tower. On this question see Michailidis (2009; 2015, 168, fn. 21) who mentions, citing Ernst Diez, “the legend of Qabus ibn Vushmgir, who [...] was placed in a glass coffin that was suspended by a chain from the dome inside the Gonbad-e Qabus”.

region, its single entrance door is positioned approximately 1,5 m off the ground, obviously to reduce the accessibility of the mausoleum (Michailidis 2015, 140-1, 150 for the inscription).

5.3.3 Tomb Tower of Lajim (1022-23)

The tomb tower in the village of Lajim [fig. 11.3] was built on top of a hill by a princess named Chihrazad in memory of her son Shahriyar ibn Abbas Shahriyar, unknown in other sources, but supposed by Melanie Michailidis to belong to the Bavandid dynasty (Michailidis 2015, 141-2). The dedicatory inscription presents, once again, a text in Arabic, and above it, its equivalent in Pahlavi, now almost illegible (Michailidis 2015, 151 for the inscription). Attention is attracted by one of the rare ornaments of this mausoleum, disposed between the inscription and the cornice, a small colonnade-arcade, which reminds Sassanian forms; its niches seem to prefigure what would become, some decades later, the triple band of stalactites in Abarquh (see below).

In its current state, the dome of the Lajim tower has an ovoid-pointed shape. It may replace an original conical dome, but there is no evidence to support this. Otherwise, it could be seen as a reminder of Sassanid parabolic domes (except for its pointed shape). The same can be said of the Resget tomb tower (see below). Here also, the sole entrance door is approximately 1,8 m off the ground, but it is preceded by seven steps, well preserved (or restored/added?). This door has an original triple elongated frame topped by a triple pointed arch. A tomb lies on the floor, but it is a late cenotaph (Michailidis 2015, 142).

5.3.4 Resget Tower (eleventh c.?)

The tomb tower of Resget [fig. 11.4], not far from Lajim, was probably erected in memory of two brothers, princes of the Bavandid dynasty. The inscription, both in Arabic and Pahlavi, does not provide the date of construction, but the monument has a close kinship with that of Lajim. However, its ornamentation is much richer, with two superimposed rows of small hanging triangles. Under them run two bands apparently made up of plaques of stucco with very refined treatment, including the inscription.⁶⁴ The sole entrance door is

⁶⁴ For this reason, Michailidis (2015, 142) proposes to date it to the late eleventh-early twelfth c.

approximately 1,5 m off the ground, without any steps to access it (Michailidis 2015, 142, 151 for the inscription).

Before the recent installation of a conical metal protection, older photographs showed a distinctly ovoid, fairly high dome, as in Lajim (except for the pointed tip, here absent or no longer visible). If it turns out that the original shape was parabolic, we would have another reference to the Sassanian past.

5.3.5 Damghan, Pir-i Alamdar (1026-27) and Chehel Dokhtaran (1054) Towers

Two tomb towers of the eleventh century are located out of the 'Bavandid domains', in the town of Damghan, to the south of the Elborz mountains ("in the shadow of the Elborz" according to Michailidis 2015, 165).

The oldest, the Pir-i Alamdar, was built for the Ziyarid governor of the region by his son Bakhtiyar in 1026-27 [fig. 11.5] (Adle, Melikian-Chirvani 1972, 231-5, 266-7; epigraphy 250-6; Michailidis 2015, 143). It is a relatively high (16 m) and slim (6.40 m in outer diameter) cylindrical brick tower with a rather low hemispheric, slightly pointed dome. It is not certain that it initially had a conical covering. For the first time, the monument shows, in its upper part, a wide decorative zone, composed of two bands with geometric ornaments, and between them, a high belt with an Arabic inscription in Kufic style.

During their visit in the 1960s, Ch. Adle and A.S. Melikian-Chirvani noted that, on the southwest side, where the mausoleum's door is located, the ground level is about three meters higher than that on the north side of the tower (Adle, Melikian-Chirvani 1972, 233, and plate XVIII). One might wonder if this is not a late filling. In such a case, the initial position of the door may have been close to that observed at the three previous monuments (Mil-e Radkan, Lajim, Resget), that is to say, (very) high, so as not to be immediately accessible.

The second tomb tower of Damghan, called Chehel Dokhtaran, was built, according to its Arabic inscription, in 1054-55 [fig. 11.6]. It obviously follows the model of Pir-i Alamdar (Adle, Melikian-Chirvani 1972, 235-8; epigraphy: 256-9; Michailidis 2015, 143). It has almost the same characteristics and similar proportions but slightly less slender (14.80 in height and 7.80 in outer diameter), with however a higher, parabolic dome, again with a pointed tip,⁶⁵ as in Lajim. Its decoration is abundant and follows the same triple rhythm, with

⁶⁵ Adle and Melikian-Chirvani (1972, 238) cleverly call this shape of dome "en obus" = "shell dome".

two ornamental bands and, between them, a wide and elegant Kufic inscription. The motif used in the two ornamental bands is the Greek meander (the row of svastikas) which was widespread during the Sassanian period (and also popular on Armenian monuments of the eleventh c.). A low tomb lying on the floor of the tower is, in all likelihood, a late addition (Kamali 2014, 2; 2025).

5.3.6 Gunbad-i Ali (1056)

Alongside our report, let us briefly mention a monument that complements the series of innovative creations in northern Iran during the first half of the eleventh century. It is the first (the oldest) among the tomb towers with an octagonal outline, a widespread paradigm in the following centuries throughout the region. The Gunbad-i Ali tower [fig. 11.7] was built in 1056 at Abarquh, far outside the Caspian region, in the province of Fars, by order of a prince named Firuzan, of a local Persian dynasty related to the Ziyarids and Bavandids.⁶⁶

In addition to its original plan, this tomb tower has unusual features: A) It is made of rubble stone instead of brick. B) It has, at the upper edge of the main octagonal volume, above a band with an inscription, a very large cornice with three rows of ‘archaic’ (resembling wide niches) stalactites (*moqarnas/muqarnas*) – a precocious use, in the region, of such a device. Apart from their form, these stalactites are original in that they are modelled in the masonry of rubble stone and mortar. They remind not only the arcade of Lajim but also the ‘proto-stalactites’ used inside Arab Ata mausoleum (see above). C) The dome (perhaps restored) of the tomb tower has an unusual rounded, almost bulbous (onion) form.

This dome is set back from the wide cornice that precedes it. It has therefore been assumed that, in accordance with the octagonal outline of the main volume, it could have been covered by a second, pyramidal dome, which would make it one of the earliest examples of this shape. However, this seems unlikely for two reasons: a) to take into account the curvature of the bulb and the projection of the cornice, a very pointed pyramid would be needed; b) the present dome is carefully built with alternating sloped brick courses in *opus spicatum* (herringbone pattern); it would be strange to cover and hide such meticulous masonry.

⁶⁶ Michailidis (2015, 143); see also: Archnet > Site > Gunbad-i ‘Ali.

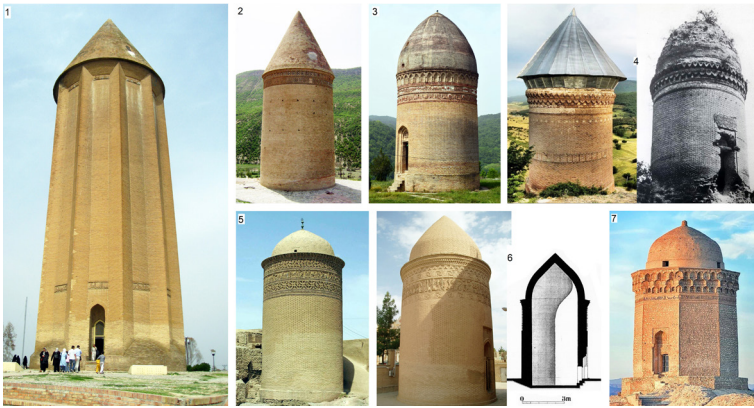


Figure 11 Seven tomb towers of northern Iran prior to Seljuk domination. 11.1 Gunbad-i Qabus (1006-07). Online photo thehistoryhub.com; 11.2 Mil-e Radkan (1016-21). Online photo <https://commons.wikipedia.org/>; 11.3 Lajim (1022-3). Online photo itto.org/iran/; 11.4 Resget/Resket (ca. eleventh c.). Online photo es.iranicultura.it. Archival photo taken in 1933 by André Godard (1936); 11.5 Damghan, Pir-i Alamdar (1026-27). Online photo visitiran.ir; 11.6 Damghan, Chehel Dokhtaran (1054-55). Online photo fr.iranicultura.it. Section by Adle and Chirvani (1972, pl/ XXI); 11.7 Gunbad-i Ali (1056). Online photo www.destinationiran.com

5.4 The Possible Role of the First Pair in the Triad Armenia – Persia – Seljuks

Just as Ch. Adle and A.-S. Melikian-Chirvani (see above), Oleg Grabar believed that the tomb towers in northern Iran were remnants of Zoroastrian funerary traditions (Grabar 1975, 342). At the same time, they obviously served as one of the main sources of inspiration for the more or less tower-shaped mausoleums of the Muslim world, from Central Asia to Anatolia.

Given the importance, from the early Christian period, of the funerary sphere in Armenian sacred architecture, and the considerable development, in Armenia, of turriiform structures during and after the period of Seljuk domination (eleventh-thirteenth centuries), we can measure the interest of studying the flowering, in the early Middle Ages, in recently Islamized Iran, then at the beginning of Seljuk rule, of all the innovative structures mentioned above.

This is not the place to open the vast field of possible exchanges between the two schools of architecture, the Persian in its Persian-Seljuk component, and the Armenian with its close links to Seljuk monuments of present Turkey. This should include for example a comparative study of funerary and turriiform constructions, a survey of the polygonal and cylindrical drums surmounted by a conical dome, sometimes pleated like an umbrella, a study of the development of the portals with a *'pishtaq'* trend, and of the bands and networks of

stalactites transposed from brick to stone. Suffice it to say that all these important questions, whose examination has only partly begun, remain open and consequently request further investigation.

One of the interesting questions that could be asked in this context, for the time being purely theoretically, is the following: could the cylindrical drum topped by a conical dome of the stone churches of Armenia have played a role in the genesis of the tall funerary towers of Iran, made of brick, of which the first examples date back to the early eleventh century? If we take into account that these shapes were elaborated in Armenia towards the end of the Golden Age (last decades of seventh century) as a result of the development of the support of the dome drum by pendentives, which gave to the drum a cylindrical shape (first internal, then also external), and subsequently, very naturally, a conical shape to the dome,⁶⁷ the answer is, in theory, clear.

As we have seen, the dynamics at play in Transoxania in the tenth century and then the rise of tomb towers in northern Iran from the beginning of the eleventh century were of considerable strength. This does not exclude the possibility that a seductive graft from Armenia may have contributed to the creation of these extraordinary forms in brick architecture. In turn, the Seljuk Turks, once settled, after Iran, in Asia Minor, could very well have wanted to draw inspiration from the initial authors of these solutions, who had the advantage of mastering the stone that predominated in their new domains. Of course, this construction of the mind remains hypothetical for the moment, but it may stimulate our investigations.

6 Reticulated Pendentives and Bands in Medieval and Late Medieval Periods

Among the many areas of exchange between Armenian and Muslim Persian and Seljuk architectures, there is one which, it seems, has not yet been studied – that of the reticulated forms in the transitional systems under the dome. In Armenia, these reticulated systems appear in two different periods, while in the Middle-Eastern Muslim world, there was a long continuous process of creation starting from the eleventh century almost until our days, including the very important Timurid phase. This could not take place in Armenia for well-known reasons: the devastations resulting from the decline of Mongol power in the second half of the fourteenth century and

⁶⁷ This evolution is clear in the last decades of the seventh c.: Donabédian 2008, 119-20, 126-9, 186-8. The result becomes a norm in the post-Arab period, since late ninth c.

the invasions of Tamerlane at the end of the fourteenth century, followed by those of the Black Sheep and White Sheep Turkmen in the fifteenth, and then the incessant wars between the Ottomans and Safavids long interrupted the development of Armenian architecture. It was only after the peace treaty between these two states in 1639 that Armenian construction activities could resume.

6.1 Persian-Seljuk New Systems of Transition in the Eleventh-Fourteenth Centuries

Several monuments created in Iran and Transoxiana during the periods of the Seljuk sultanate and the Ilkhanate attest a vivid interest towards new formulas of ornamentation on the inner surface of the domes and of transition under them, and a strong development of complex geometry in architectural compositions and decoration (Bloom, Blair 2009, 1: s.v. 'Architecture. VI. 1. Iran, ca. 1250-ca. 1375', 128-31) [fig. 12]. The present essay does not allow to develop this subject. Suffice it to recall the innovative experiments made, for example, on the numerous domes and vaults of the *Masjid-e-Jameh* (Friday mosques) of Isfahan and of Ardestan (Isfahan province), from the late eleventh century up to, approximately, the early fourteenth century (the datings are uncertain).⁶⁸

It has been noted that the principle of the trilobed squinche created at Tim in 977-8 was brilliantly developed in the brick masonry under the two main domes (late eleventh c.) of *Masjid-e-Jameh* of Isfahan. The same can be said of the main dome of Ardestan (Ettinghausen, Grabar 1987, 279-83). The masterly treatment of the intersecting ribs, used for the construction and at the same time for the decoration of the domes and vaults of the mosque, is not less remarkable (Ettinghausen, Grabar 1987, 283-4). It allowed to ornate the hemispheric surfaces with a great variety of polygonal - triangular, rhombic, and pentagonal - units. Particularly impressive is the example of the large northern dome of the Isfahan mosque (1088-9), where very light arches/ribs, drawing a series of five-pointed stars, cover the hemisphere, through their intersections, with polygons, mainly rhombic [fig. 12.1].

Moreover, in the same mosque, on several parts of the vaults probably dating from a later period (twelfth-early fourteenth cc.?) (Pope, Ackerman 1967, 8: 303), these kinds of intersecting ribs extend to the space located under small domes, again creating polygonal units, in particular triangular [fig. 12.2]. In the mosque of Ardestan,

⁶⁸ Several plates in Pope, Ackerman (1967, 8: 289-303). See also Ettinghausen, Grabar (1987, 257-64, 279-84); Hillenbrand (2021, 112-13).

on a secondary vault with a faintly curved dome, said to date back to the twelfth century (Pope, Ackerman 1967, 8: 326), on its four corner supports (= four 'pendentives'), one can see thin intersecting ribs which delimit a series of rhombic compartments, perfect example of reticulated pendentive [fig. 12.3]. Such figures, if it could be proved that they predate the thirteenth century (which does not seem very likely), could be the source of the shapes present in Armenia and in Seljuk Anatolia, examined below.



Figure 12 Isfahan & Ardestan Friday Mosques. Reticulated devices under domes and vaults (eleventh-fourteenth cc. ?). 12.1 Isfahan, Friday Mosque, northern dome (1088-89); Online photo Diego Delso. 12.2 Isfahan, Friday Mosque, secondary low domes (twelfth-fourteenth cc. ?). Photo Hamid Vakili/Mehr News; 12.3 Ardestan, Friday Mosque, secondary low dome (twelfth-fourteenth cc. ?). Photo Arthur Pope (1967, 3: 326)

6.2 Armenian and Anatolian Seljuk Reticulated Systems (Thirteenth-Fourteenth cc.)

In Armenia, a system of reticulated pendentives and reticulated horizontal band appeared from the early thirteenth to the first decades or fourteenth century inside several narthexes (*gavit/zhamatun* in Armenian), some monastic buildings and in one funerary chapel [fig. 13]. It was applied to the transition zone between the square formed by the supports and the circular or polygonal base of the dome (or the lantern), in such edifices which have a low dome, without a drum, with a central skylight, or a lantern in the form of a small rotunda [figs 13.1 to 13.8].

This reticulated system used mainly arrangements of triangular plaques/caissons, more or less decorated with sculpted motifs. It took three forms:

- a. a pair of triangular plaques, pointing downwards, replaces each of the four pendentives; in the narthex of Khorakert monastery, now ruined, on three of the corners, instead of two, there were three triangular plaques (Mnatsakanyan 1952, 93, fig. 72);
- b. the four compartments between the 'pendentives' may feature three head to tail triangles or an arrangement of other stone shapes, or nothing at all if the space is too tight;
- c. above the 'pendentives' level, in six cases, the horizontal band preceding the dome or lantern is occupied by a row of smaller, triangular caissons, head to tail.

The eight (partially) preserved Armenian examples (the narthexes of Saghmosavank [shortly after 1215], Tegher [1221], Makaravank [before 1224], Khorakert [1252], Neghuts [thirteenth c.], a refectory [ca. 1250] and a library [1262] in the monastery of Haghbat, and the Holy Mother of God chapel at Yeghvard [early fourteenth c.]) are part of a series of experiments related to the same issues, demonstrating the inventiveness of builders in their search for a variety of solutions (Mnatsakanyan 1952, 54-5, 51-60, 63, 65, 71, 93, 95, 113, fig. 95).

The same principle of triangular caissons fitted into a transitional belt under a dome (often also equipped with a central skylight) on a square, can be seen in Muslim monuments of Seljuk Anatolia/Asia Minor. Three examples are located in Iconium/Konya (capital of the Seljuk Rum sultanate from late eleventh to thirteenth century): in Alaeddin mosque (ca. 1220s) (Redford 1991), Karatay *medrese/madrassa*, and Ince Minareli *medrese/madrassa* (1251-2 and 1265-79 respectively) [figs 13.9 to 13.11] (Ettinghausen, Grabar 1987, 318-22). These caissons are usually called in specialized literature 'Seljuk triangles' (Yetkin 1962, 9) or 'Turkish triangles' (Ettinghausen, Grabar 1987, 325). They are adorned (only underlined on their edges in the case of Ince Minareli *medrese*) with turquoise glazed tiles bearing polygons and stars.

In the Alaeddin mosque [fig. 13.9], the earliest of the group, each angle is filled by three triangles, with the central one pointing downwards; and along the remaining length of each of the four sides, six smaller triangles are placed head to tail. The whole row constitutes a more or less regular horizontal band. This scheme is clearly related to the principle of single or double horizontal row of triangles head to tail adopted on the Armenian monuments mentioned above.

In the two *medrese*-s, the picture is a little different: only the four corners under the dome are concerned, and each of them is occupied by a cluster of five (Karatay *medrese* - fig. 13.10) and

four (Ince Minareli *m.* – fig. 13.11) long triangular rays, pointing downwards. The scheme present here is closer to the one employed on the pendentives of the Makaravank narthex.

An original solution is adopted in the extraordinary mosque-hospital of Tevrik/Tephrike/Divriği (Pancaroglu 2009) (1228-9), where similar triangles, devoid of ornamentation, have the form of protruding dihedrals [fig. 13.12].

Beyond the hypothetical (but not really convincing) common Iranian source of inspiration envisaged above, it is impossible not to see, despite the differences, the deep kinship that links the two devices, Armenian and Anatolian Seljuk, and the fact that this experiment is proper to them. The stone material may have played a certain role, but the sharing of experience, widely evidenced elsewhere between Armenian and Seljuk architectures (Donabédian 2020b, 80-101), is also very likely.

It is possible that a conjunction of factors led to the very bold formulas that were multiplying under the Timurids during the fifteenth century. Perhaps both the (probably first) networks elaborated in Armenia and Seljuk Anatolia, and the experiments that had begun to emerge on the same subject of dome supports in Iran and Central Asia under the Seljuks and Mongols, would now converge to flourish under the Timurids.⁶⁹ The continued use of ‘Seljuk triangles’ in early Ottoman constructions (Goodwin 1971, first four chapters [15-141], *passim*) should also be considered as a possible factor of transmission. In any case, the developments recorded during the Timurid period marked a radically new stage in the history of reticulated devices of transition.

⁶⁹ Note on this subject, in Bloom and Blair (2009, 3: s.v. ‘Squinch’, 230), the following remark: “Closely related to the [Timurid] squinch-net vault are so-called ‘Turkish triangles’ which simplify the squinch into a vertical fan of triangular facets, as can be seen in the Karatay Medresa in Konya.” This interesting observation, which highlights the link between the two phenomenons, must be completed by the mention of the parallel, simultaneous and obviously also related Armenian experiments.

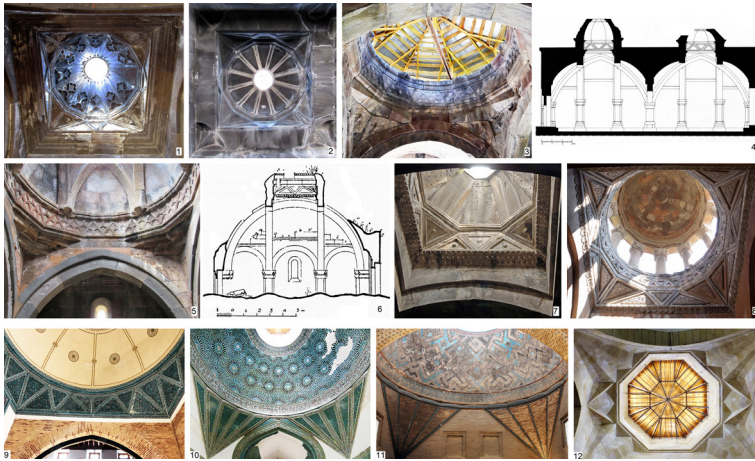


Figure 13 Armenian and Anatolian Seljuk reticulated systems (thirteenth-fourteenth cc.). 13.1-8: Eight Armenian monuments (present-day Republic of Armenia) – photos PD. 13.1. Saghmossavank monastery, narthex/*gavit* (shortly after 1215); 13.2. Tegher monastery, narthex/*gavit* (1221); 13.3. Makaravank monastery, narthex/*gavit* (before 1224); 13.4. Haghbat monastery, refectory (ca. 1250). Longitudinal section by Anatoly Jakobson, after Thierry & Donabédian (1987, 535, fig. 734); 13.5. Neghuts monastery, narthex/*gavit* (thirteenth c.); 13.6. Khorakert monastery, narthex/*gavit* (1252). Longitudinal section by Stepan Mnatsakanyan (1952, 93, fig. 72); 13.7. Haghbat monastery, library (1262); 13.8. Yeghvard, Holy Mother of God chapel (first decades of fourteenth c.); 13.9-12: Four Anatolian Seljuk monuments (present-day Republic of Turkey). 13.9. Iconium/Konya, Alaeddin Mosque (ca. 1220s). Online photo Ersin Gin/Flickr; 13.10. Iconium/Konya, Karatay medrese/madrasa (1251-2). Online photo Ali Berrada; 13.11. Iconium/Konya, Ince Minareli medrese/madrasa (1265-79). Online photo dome.mit.edu/Igor Demchenko; 13.12. Tevrik/Tephrike/Divriği, mosque-hospital (1228-29). Online photo R. Prazeres/Wikimedia Commons

6.3 Sophisticated Formulas Elaborated Under the Timurids (Fifteenth c.)

After Tamerlane's ravages of late fourteenth century, the Timurid golden age began in Central Asia, in Transoxiana in particular, in its capital, the city of Samarkand, as well as in Khorasan (northeast of current Iran and main part of Afghanistan).⁷⁰ It lasted throughout the fifteenth century until the early sixteenth.⁷¹ A plethora of architects and masons of various origins, many of which were forcibly brought from the conquered countries, were then at work. Building on the Ilkhanid heritage, they erected a large number of edifices remarkable

⁷⁰ The author expresses his sincere gratitude to Sussan Babaie for her precious bibliographical assistance.

⁷¹ For a thorough and detailed study of Timurid architecture see Golombek, Wilber (1988). A useful synthesis on Timurid architecture, mainly in Transoxiana, can be found in Pougatchenkova (1981). A more detailed analysis, in the (wide) limits of historical Khorasan, is given by O'Kane (1987). See also Bloom, Blair 2009, 1: s.v. 'Architecture, VI, 2. Iran, Afghanistan and Central Asia c. 1375-c. 1500', 131-137).

for their considerable scale, the sophistication of their compositions and the splendor of their ornamentation [fig. 14]. The Timurid domes, in particular, now often double-shelled (sometimes even triple-shelled),⁷² presumably were intended to impress the faithful and subjects both by the considerable elevation of their exterior volume in an onion bulb shape (bulging and pointed) covered with turquoise glazed tiles, and by the richness of their internal treatment.

Due to the subject of this part of our study, we will focus our attention on vaults and domes, and particularly on the transition devices under them, as well as on the complex geometry used for their elaboration. One of the great masters of this science and art was the architect Qivam al-Din of Shiraz (fl. 1410-1438),⁷³ notably the author of the mausoleum of queen Gawhar-Shad (1417-38) in Herat (Afghanistan) [figs 14.1, 14.4 to 14.6] (Golombek, Wilber 1988, 192, 302-7) and of the *madrasa* (quranic school) known as Ghiyathiyya (1438-44) in Khargird (Iran) [figs 14.7-8] (O’Kane 1976; Golombek, Wilber 1988, 148-50, 322-4).

In these monuments, the observer is struck by the multitude of cells, both small and large, that cover the surfaces under the dome. The small ones are *muqarnas* (stalactites), several polygons, rays..., while the large ones are squinches and pendentives, which are themselves hewn into cells. This results in a unification of the interior space where the dome seems to have an unreal lightness, where the differences between the various components and their respective functions tend to fade away and merge into a sumptuous enchantment, harmonious despite the innumerable number of elements composing it. To imagine the atmosphere which prevailed in such spaces, one must add the rich polychromy that existed on their vaults, as can still be seen, for example, in the Herat Mausoleum of Gawhar-Shad [fig. 14.6].

The description and analysis of the devices used in these complex constructions are made difficult by their great diversity.⁷⁴ One of their important elements is the large triangular spandrel between the thin pointed arches which, departing from the angles of the hall, delimit the central square (in some cases the two superimposed central squares). In each of the four spandrels, these arches, as well as secondary ribs, intersect and create a network. Some authors refer to them as ‘reticulated pendentives’ or ‘pendentives network’

⁷² Like for example on the Mausoleum of Gawhar Shad in Herat (1438): Pougatchenkova 1981, 126.

⁷³ On the “Luminary of the Timurid court”, see O’Kane 1976, 79, 92; 1987, 37, 50; Wilber 1987; Golombek, Wilber 1988, 189-93; Bloom, Blair 2009, 3: 137; Babaie 2011.

⁷⁴ See, in O’Kane 1987, the ch. Vaulting (46-8) and Domes (49-53); in Golombek, Wilber 1988, see the ch. The Geometry of Stellate Vaults (169-72).

(Pougatchenkova 1981, 27-9);⁷⁵ others prefer the terms ‘reticulated squinches’ or ‘squinch nets’.⁷⁶ To describe these complex systems, the rightest is probably to cite those who have long studied them.

Bernard O’Kane, for example, wrote: “it was the set of intersecting arches to transform the space within this standard shell [the domed square] which became the hallmark of Timurid vaulting techniques in the first half of the fifteenth century” (O’Kane 1987, 49-50). A little further on, the same author added: “The combination of intersecting arches and transverse vaults was also used with squinch nets – zones of transition [...] – another form of vaulting whose development was forged in the Timurid period”. And also: “The intersecting arches combine to produce a series of [...] rhomboidal compartments with a zig-zag outline” (O’Kane 1987, 51).

Insightful observations have also been made by Lisa Golombek and Donald Wilber, for example: “Walls were virtually eliminated as arched niches in them became wider and wider, higher and higher. [...] Domes erected over intersecting arches appear to float without support. [...] In Timurid architecture every effort is made to establish vertical linkage” (Golombek, Wilber 1988, 212).

As noted above, the principle of the diamond networks under the domes had probably already started to emerge in Iran in the previous period. For their part, the Armenians and the Seljuks of Anatolia, in the thirteenth century, had already elaborated their specific initial variant. Nevertheless, the sophistication of the compositions and devices developed by the architects in the service of the Timurids is truly one of the emblematic forms of their art.

After the collapse of the Timurid power, like a large part of the eastern Muslim world, the Safavid Iran, from the sixteenth century, seized this heritage to enrich its own architectural vocabulary. In turn, in the seventeenth century, the Armenians, transplanted in Iran, benefited from this huge transmission and adopted some of the characteristic features of the Timurid-Safavid repertoire.

⁷⁵ A confusion by the translator between ‘pendentive’ and ‘squinch’ is not excluded. But in any case, the result is, at least for the author of these lines, acceptable.

⁷⁶ O’Kane (1987, 51, 60, *passim*); Bloom, Blair (2009, 3: 228-30, s.v. ‘Squinch’) speak of “squinch-net vaulting” (229) and of “network of squinches or pendentives” (230).

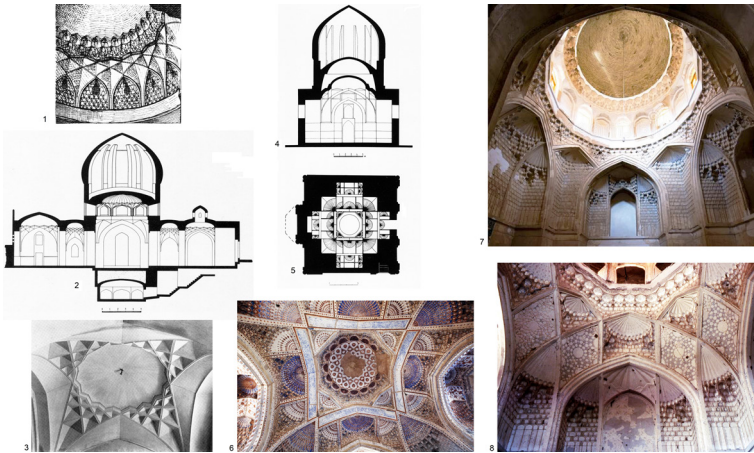


Figure 14 The apotheosis of reticulated devices under Timurids (fifteenth c.). 14.1. Herat (Afghanistan), Gawhar-Shad mausoleum (1417-38), conch. Architect Qivam al-Din of Shiraz. Drawing after Galina Pougatchenkova (1981, 28, fig. 17); 14.2-3: Mashhad (Iran), Masjed-i Shah (1451). Longitudinal section and secondary low dome, after Pougatchenkova (1981, 165); 14.4-5: Herat, Gawhar-Shad mausoleum (1417-38). Lateral section and plan, after Pougatchenkova (1981, 126); 14.6. Herat, Gawhar-Shad mausoleum. Zenithal view of the dome. Architect Qivam al-Din of Shiraz. Online photo Marius Arnesen; 14.7-8: Khargird (Iran), madrasa Ghiyathiyya (1438-44). Initial architect Qivam al-Din of Shiraz. 14.7. Dome of the mosque, internal view. Online photo Alamy Stock; 14.8. Dome of the Dars-khana (Lecture hall), internal view. Online photo Pinterest.co.kr

6.4 Armenian Reticulated Pendentives and Bands Under Safavid Rule

The brilliant achievements of architects in the service of Safavid power of Iran [pl. 15] are well enough known that there is no need to detail their characteristics here.⁷⁷ Suffice it to say that, from the late sixteenth century onwards, the most representative monuments were to be found in the new capital, Isfahan, and their domed interiors were distinguished by networks of intersecting arches directly inspired by those of the Timurids and no less sophisticated than them.

6.4.1 The Foundation of New Julfa, a Suburb of Isfahan

In 1604-5, the Armenians were torn from several eastern and southeastern regions of their country, for most of them with an extreme violence, and deported to Iran by Shah Abbas I Safavid, in particular, from the flourishing trading cities and craft centers of

⁷⁷ See Hillenbrand [1986] 2008; Bloom, Blair 2009, 1: s.v. 'Architecture. VII. c. 1500-c. 1900. B. Iran. 1. c. 1500-c. 1700', 171-5.

the Araxes valley (province of Nakhichevan), and first of all from the town of Jugha/Julfa. The Shah's objective was twofold: a) to deprive the Ottomans of resources that could favour their campaigns against him, b) to benefit from the talents of Armenian artisans and merchants in order to develop the economy of his kingdom and notably its silk trade. The wealthiest of the former inhabitants of Julfa were resettled in a suburb of Isfahan called New Julfa.⁷⁸

In a very short period, thanks to the protection and privileges accorded by Shah Abbas, the deportees managed to build the entire district of New Julfa (Carswell 1968), which included, in the seventeenth century, thirty-two⁷⁹ churches (among them, the primatial Holy Savior, usually called 'Vank' [monastery], is a monastic church)⁸⁰ and several sumptuous residences (Karapetian 1974; Hakopian, Hovhannisian 2007). The high density of sanctuaries in a relatively small area (about 1.5 km x 1 km) and for a population that, at the height of the growth of this community, numbered 30,000 souls (Bayburdyan, Harutyunyan 1982, 366), is astonishing. It naturally reflects the religious fervor of the inhabitants, but also the spirit of emulation that animated the faithful and especially the wealthiest notables and merchants, within each part of the Armenian quarter. The former deportees also succeeded in creating a considerable economic power capable of promoting and monopolizing a large part of the international silk trade of the Safavid kingdom.⁸¹

6.4.2 New Julfa's Churches, a New Page in Armenian Architecture

Earlier in this essay, the 'unique phenomenon' of the *khatchkars* of Jugha was evoked as a kind of precursor to the architectural and decorative 'revolution' that was to take place in Isfahan. Indeed, what happened in the Armenian community of New Julfa has much to do with a revolution in Armenian religious customs and architectural traditions.

⁷⁸ A synthesis on the "Great deportation" and the foundation of New Julfa can be found in Mahé, Mahé 2012, 344-9.

⁷⁹ According to Armen Hakhnazarian and Vahan Mehrabian (1992, 14-5), concerning the seventeenth c., this impressive number included 25 (or 24; see page 13) apostolic churches (of which twelve are destroyed or ruined) and seven catholic churches (all destroyed).

⁸⁰ The difference between church and monastery is somehow questionable in Isfahan, as Armenian churches had a particularity: each of them was surrounded by various ancillary buildings, including a well, a bread oven, cells..., and was protected by high walls. These ensembles could thus serve as shelters for the population in times of necessity. See Hakhnazarian, Mehrabian 1992, 13.

⁸¹ See Khachikyan 1988; Chaudhury, Kévonian 2008; Aslanian 2011; Mahé, Mahé 2012, 355-8.

Transplanted to Isfahan, the Armenians began to build dozens of religious complexes all united by a great homogeneity, although far removed from traditional rules. First of all, despite the fact that New Julfa was isolated from the rest of the city, they ensured that their churches, like the fortified monasteries of the Middle Ages, were all protected by strong enclosures and were self-sufficient. Settled in a region with few lapidary materials, the builders had no difficulty to use brick as, for many of them coming from the province of Nakhichevan, this material was familiar. For the composition of their churches, they chose two of the domed types most widespread in their country: the inscribed cross church with a dome on four free supports, and the domed hall (*kuppelhalle*) or partitioned inscribed cross church, where the supports of the dome are attached to the perimetral walls. But, as Armen Hakhnazarian noted, aside from the planimetric compositions, most of the other elements show a strong Iranian influence.⁸²

One of the most striking features is that on the double-shelled cupolas of the largest churches (Holy Bethlehem [1628] and the Holy Savior [1655-64]), [fig. 15.1], the upper dome is slightly onion-shaped (bulbous), a trait absolutely unknown in Armenia. As in Timurid and Safavid mosques, many (large and small) domes have a skylight in their center, often surmounted by a lantern. Apart from the main dome, in the secondary spaces of the churches, the traditional barrel vaults are systematically replaced by low, slightly curved domes (perhaps better called calottes/caps), often with a central skylight. In the indoor spaces, the arches are all pointed, like in Timurid and Safavid architectures. Similarly, the façades are often animated by rows of typically Iranian wide flat niches covered by a pointed arch.

Among other elements borrowed from Iranian repertoire, one can mention, in external decorations (but not on the domes), the use, however modest, of small blue tiles, and in windows, the presence of *transennae* in brick and colored glass. An unusual element in Armenian context, of rather byzantine origin, is the presence, above the western arm of the churches, of an internal tribune for women (a *matroneum*), bordered by a high wooden parapet. Probably on the model of the *iwan* of Iranian mosques, in the inner courtyard of some of the Armenian complexes, a separate apse is built, widely open and called 'summer church', allowing to celebrate mass outdoors on the hottest times of the year.

Before moving on to the examination of reticulated systems, a major characteristic must be underlined, the abundance of interior decoration. Among the numerous churches built in New Julfa *grosso*

⁸² Hakhnazarian, Mehrabian (1992, 13). On the architecture of these churches see also Hasratian (2011).

modo in the first half of the seventeenth century, the main ones (Holy Mother of God [1613], Holy Bethlehem [1628] and the Holy Savior [1655-64]) stand out not only for their architectural originalities, but also for their painted (and ceramic) decoration of mainly high quality and astonishing opulence. This decoration juxtaposes religious figurations inspired by western European models, and sophisticated ornamental compositions borrowed from the Safavid Persian repertoire.⁸³ This choice is representative of a dynamic society, led by a mercantile elite in constant contact with the great cities of the West. While remaining attached to its identity and faith, this society was largely open both to local culture and to the external world, particularly to European art. The richness of the internal decoration of New Julfa's churches also reflects the considerable resources available to their patrons.

6.4.3 Armenian Reticulated Pendentives and Bands in New Julfa (Isfahan)

Naturally, the question of the transition under the vaults and domes, which is our primary concern, deserves a particular attention. In all the Armenian churches of New Julfa we observe the widespread application of arch intersections that create reticulated pendentives and bands. However, in all cases, the formula reproduced is a simplified version of Persian models, as if the aim was to avoid excessive sophistication and, on the contrary, to highlight the clarity of the device composed of an adjustment of some rhombuses [fig. 15.1]. On the first, lowest stage under the dome, on each angle, an elongated rhombic pendentive is surmounted by one or two (very rarely three) rows of slightly concave lozenges. The same is true for the secondary low domes and for the half-domes of the apses. Inside the Holy Savior cathedral, however, the hemisphere of the dome shows a relatively complex treatment, obviously inspired by the luxuriant ornamentation of the *Masjid-e-Jameh* (Friday Mosque) of Isfahan (see above). Here we see an eight-pointed star, each extremity of which presents the same disposition: one elongated rhombus, then two rows of (two + three) lozenges.

Omnipresent in New Julfa, the system of reticulated pendentives and bands developed from the beginning of the Armenian implantation in Isfahan. It is therefore natural that we also find it in other

⁸³ Important studies were carried out on New Julfa's mural paintings during the twentieth c.: Carswell 1968, 21-5; Martikyan 1971, 6-29; Ghazaryan 1974, 13-50. More recent publications on this subject: Laporte-Eftekharian 2006; 2011; 2021; Hakobyan 2009, 238-43; Landau 2019; Babaian 2021.

Armenian communities established in Iran, from the seventeenth to the nineteenth century. In two important ensembles of the Tabriz province (northwestern Iran), Saint-Stephen of Maghardavank near Darashamb (1643-80) [fig. 15.2] (Hofrichter, Uluhogian 1980, 48-53, 57-63; Alpagó Novello 1988, 83, 87), and Sohrul/Sorhul (ca. 1840 – fig. 15.4) (Alpagó Novello 1988, 20, 31, 39), it is applied on the pendentives, as well as on the lower part of the hemisphere of the dome, and at the base of the conchs, and, in the case of Sohrul, it approaches, to a certain extent, the complexity it had acquired during the Timurid period. On the contrary, in the famous ensemble of Saint-Thaddeus of Artaz, inside the main, white church (1810s-20s), the reticulated system is considerably diminished, almost indiscernible [fig. 15.3]. It is reduced to a corolla of eight triangles, under the circular ring of the dome's drum. This corolla is created by the tips of the four main arches and the broken band that crowns each of the four pendentives (Kleiss, Seihoun 1971, 46-8, 64, 66). However, it should be noted that nowhere, outside of New Julfa, has anyone among the Armenian architects allowed themselves to erect bulging domes as a second covering instead of the traditional conical, pyramidal or umbrella-shaped domes.

Nevertheless, Safavid-Armenian architecture of New Julfa, and in particular the reticulated devices have exerted a certain influence on Armenia itself. This influence is significant not because of the breadth of its reach (in reality very limited) but because it concerned the main sanctuary of the country, Echmiadzin Cathedral. It is possible that the painted treatment of the reticulated pendentives in the main churches of New Julfa played a role in the 'appeal' of this device. In the three mentioned sanctuaries of New Julfa, each of the main, three lower lozenges of the reticulated pendentives is occupied by a winged angel (*cherub* with two pairs of wings and *seraph* with three pairs of wings), whereas the three rhombuses of the upper row bear light floral motifs of Persian inspiration. It is easy to imagine how, set against a dark background, the pictures of these angels, painted in gold and placed at the top of the sacred space, at the four corners (spandrels) under its central circle, could impress the faithful and visitors. Thus, the images could contribute to the attractiveness of the carrying form.

6.4.4 The Influence of New Julfa's Architecture on Armenia Itself

In mainland Armenia, after centuries of devastation, after the great deportation at the beginning of the seventeenth century, although peace was restored by the Ottoman-Safavid treaty of 1639, the means were lacking to meet the immense needs for reconstruction. It was therefore primarily in the primatial cathedral of Echmiadzin that the sumptuous model of the domes and vaults of New Julfa was applied, with their principle of all-encompassing painted decor, combining Christian iconography and Iranian plant ornamentation.

In 1627, restoration work began on the dome of Echmiadzin Cathedral, which probably continued in the following years (Zarian, Ter Minassian 1998, 32). Between 1654 and 1658, the great porch-bell tower was added to the west of the edifice, and in 1682, lanterns were erected above the other three apses. Finally, throughout the eighteenth century, successive members of the Hovnatanian 'dynasty'⁸⁴ covered the interior of the cathedral with paintings on the upper part of the walls, the vaults and the dome.⁸⁵

The current state of the interior of the dome is therefore the result of numerous and lengthy interventions. It is likely that the very succinct formula, at each of the four corners under the drum, of the diamond-shaped pendentives tapering downwards, topped with two horizontally stretched lozenges, dates back to the first stage of these works [fig. 15.5]. As for the murals, they are attributed to Naghash Hovnatanian (ca. 1712-21) (Avetisyan 2019, 266; 2022, 128) and were partly repainted by Hovnatan Hovnatanian (ca. 1778-86) (Avetisyan 2019, 267; 2022, 129). However, it is interesting to note that the angels, so present on the pendentives of New Julfa, have been slightly reduced in size in Echmiadzin and transferred higher up, to the spandrels of one of the friezes decorating the hemisphere of the dome, and on other parts of the cathedral. One is at the top of the eastern arch under the drum, others on the axial (eastern and western) arms' vaults. For the rest, the painted surfaces are occupied by rows of complex, highly detailed plant compositions, diversified overall, but repeated identically in each row, which is unusual in Armenian art. The general image that emerges is one of great novelty compared to Armenian tradition and of deep kinship with Safavid (and of course with Safavid-Armenian) decorations. Nevertheless, obvious originalities can be observed, such as a more

⁸⁴ On the history/genealogy of this family of painters since the seventeenth c. see Khachatryan-Paladian 2017, 61-71, ch. *The Dynasty of the Hovnatanians*; Avetisyan 2022, 162-200, ch. *The Hovnatanians*; Dzutsova 2022, 263-73. ch. *Back to the Sources*.

⁸⁵ For a recent summary on this question (with bibliography) see Avetisyan 2019, 266-7.

measured coverage of the painting, the space given to empty (free) areas, and the large presence of the motif of the row of cypress trees, very popular in Islamic art (Aamir, Pervaiz 2018), but quite rare in Armenian art.

It must be acknowledged that, apart from the cathedral of Echmiadzin, the model of the reticulated network and rich painted decoration of New Julfa has been little followed in the rest of the country, perhaps due to a lack of resources, but also likely because of the overly unusual nature of these innovations. Such forms and devices are encountered in the aforementioned monuments of the north-west of present-day Iran (Saint Steven, Sorhul and Saint Thaddeus – [figs. 15.2 to 15.4]), which at that time (seventeenth-nineteenth cc.) were located in a still culturally, religiously, and ethnically mainly or partly Armenian region. They were also present in the province of Nakhichevan (now part of the Republic of Azerbaijan – see above), which, as the rest of eastern Armenia was then part of Persia. In Nakhichevan, as mentioned above, nothing remains of the monuments, but photographs taken by historian Argam Ayvazyan in the 1970s-80s attest the relatively large use of such devices on monuments of the second half of the seventeenth century [figs 15.6 to 15.9]. Reticulated bands and pendentives as well as painted decorations combining religious scenes and Iranian-style ornaments were used for example in churches of the small town of Agulis: St. Thomas (Ayvazyan 1984b, 26-31, figs. 14, 16-18; 1990b, 121-3, figs. 57-9), St. Christopher (Ayvazyan 1984b, 35-8, figs. 33-4; 1990b, 126-7, figs. 63, 65), St. John the Baptist (Ayvazyan 1984b, 40-3, fig. 40) and Holy Sign [Sb Nshan] of Storin Agulis [Lower Agulis].⁸⁶ The same was true, in Nakhichevan, for St. John the Baptist of Abrakunis (Ayvazyan 1981, 75-7, figs. 96-9; 1990b, 186-7, figs. 128, 130), St. Steven of Astapat ('Red monastery') (Ayvazyan 1981, 108-9, fig. 62; 1990b, 220, fig. 166) and St. John the Baptist of Tjahuk (Ayvazyan 1981, 121; 1990b, 366-7, figs. 340-1).

Although not directly related to our topic, the Blue Mosque of Yerevan, built on the orders of the Persian governor Husein Ali Khan in 1764-5, is worth mentioning. In its current state, after a significant restoration from 1997 to 2006 by a mixed Iranian-Armenian team, it has, in its main prayer hall, an original interior decoration that is slightly richer in design than that of purely Armenian monuments, but also surprisingly more sober, as it has a white background. The four large pendentives supporting the dome are adorned with three rows of lozenge, the last lozenge at the bottom, with a pointed lower

⁸⁶ The author is grateful to the president of UIOTC Organization (Union Internationale des Organisations Terre et Culture), Keram Kevonian, and to Isabelle Ouzounian, head of UIOTC's photo collections, for allowing him access to the organization's documentation from the Argam Ayvazyan Fund. Here are concerned, from the Holy Sign church of Storin Agulis, photos n° V-18071-75 of 1982.

tip, is curiously covered with a fine network of lines designing various diamonds (Nalbandyan 2023, 93, fig. 6).

It can finally be reported, here and there in Armenia, and notably in the city of Meghri, at the southern tip of the Republic, on the current border with Iran, in seventeenth-century churches, despite the absence of reticulated systems, the use of very vividly colored murals where, alongside naive-style biblical figures, Iranian floral compositions abound.

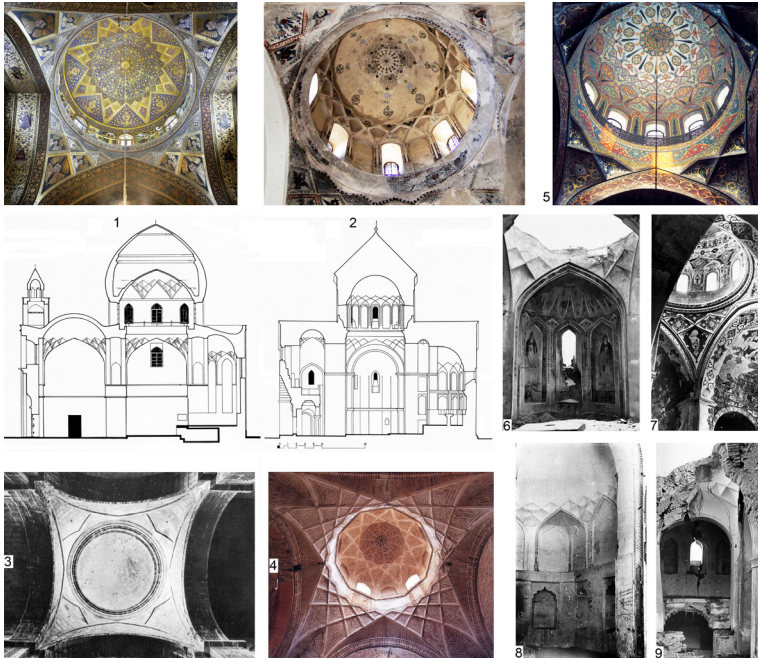


Figure 15 Safavid-Armenian reticulated devices and their impact on Armenia. 15.1. Isfahan, New Julfa, St Savior (1655-64), main dome. Photo Hrair Hawk Khatcharian. Longitudinal section after Armen Hakhnazarian (1991-92, 22); 15.2. Maghardavank, St Stephen (Tabriz province, northwestern Iran) (1643-80). Internal view of the dome. Photo Ara Melikian. Longitudinal section after Hartmut Hofrichter (1980, 62); 15.3. Artaz, St Thaddeus (northwestern Iran), dome of the main church (1810s-20s), internal view. Photo Wolfram Kleiss (1971, 46, fig. 35); 15.4. Sohrul/Sorhul church (northwestern Iran) (ca. 1840). Zenithal view of the dome. Photo Adriano Alpago Novello (1988-89, 37, fig. 7); 15.5. Echmiadzin Cathedral (Republic of Armenia). Internal view of the dome (seventeenth-eighteenth cc.). Photo Hrair Hawk Khatcharian; 15.6-9. Nakhichevan (present-day Republic of Azerbaijan), churches of Astapat and Agulis (seventeenth c., destroyed). Photos by Argam Ayyvazyan (1980s), Ayyvazyan Fund of Land and Culture Organization (OTC). 15.6. Astapat, St Stephen, internal view of the apse. Photo OTC V-33615; 15.7. Agulis, St Thomas, internal view towards the dome and the SE pendentive. Photo OTC V-33618; 15.8-9 Agulis, St John the Baptist, the apse and a portion of pendentive. Photos OTC V-33657 and V-33662

7 **Conclusion: Prodigious New Julfa as a Condense Picture of a Very Old Kinship**

The purpose of this essay was to briefly discuss certain stages of what should in reality be a long journey spanning many centuries and even millennia of exchanges between Armenians and Iranians. The term 'exchanges' is used here in a conventional sense. It would probably be more accurate to speak mainly of borrowings of Iranian models by Armenians, even though, at the same time, certain transfers in the opposite direction should also be taken into consideration. First of all, we must admit that there is still much to be investigated. The question, for example, of a possible Armenian contribution to the creation of turritiform cylindrical tomb towers with conical dome remains open. The same concerns the possible role of the Armenian and Anatolian-Seljuk experiments in the genesis of the Timurid, then Safavid reticulated transitions. As for the question of the contribution of the Armenians of New Julfa to the diffusion of European styles, patterns, and ideas in Persia, it seems quite plausible, but also requires further exploration and more documentation.

We believe that the rightest way to (provisionally) conclude is to once again contemplate the images of the splendid Cathedral of the Holy Saviour in New Julfa and to admire the astonishing synthesis of Persian and Armenian traditions, together with borrowings from European iconography, as well as the extraordinary innovations that come together there. What has been done here and more generally in the New Julfa district of Isfahan is exceptional, especially with regard to the domes of these churches. Indeed, nowhere else but in the capital of Safavid Iran did Armenian architects dare to cover their sanctuaries with bulbous domes.⁸⁷ With the prodigious opulence of their interiors, their reticulated devices and their bulbous domes, these dazzling buildings erected in a few decades in the seventeenth century, remain the symbol of the New Julfa miracle, the symbol of a unique Armenian-Persian syncretism, heir to an age-old relationship.

⁸⁷ The bulb-shaped dome was introduced in the architecture of Russian churches perhaps from the thirteenth century and certainly from the fifteenth century. The question of its origin is a matter of great interest, but beyond the scope of the present study. On this subject see Zagraevsky 2008.

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